

Employment For Persons With Brain Injuries In Oregon

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Introduction

Traumatic Brain Injury (TBI) affects people of all ages and is a leading cause of death and disability in people under the age of 45. According to the most recent Center for Disease Control and Prevention (CDC) data, of the 1.5 million Americans who experience a TBI annually, approximately half sustain at least a short-term disability, 80-90,000 persons sustain moderate to acute injuries that result in a long-term or lifelong disability, and 50,000 people die. Currently, at least 5.3 million Americans live with a permanent disability as a result of a TBI, which represents more than the number of people with disabilities due to Alzheimer's disease, stroke, epilepsy, cerebral palsy, and spinal cord injury combined. Oregon does not have a TBI registry to track actual numbers of people living with or sustaining TBI's. To obtain estimates the percentages given by CDC are used (2% of the population is living with a brain injury and .47% will sustain a brain injury each year). Using the CDC estimates, Oregon has over 72,000 people living with a brain injury, each year over 17,000 Oregonians will sustain a brain injury, and over 8500 will sustain at least a short-term disability.

A traumatic brain injury (TBI) is defined as a blow or jolt to the head or a penetrating head injury that disrupts the function of the brain (CDC, 2002). Not all blows or jolts to the head result in a TBI (CDC, 2002). The severity of such an injury may range from "mild," i.e., a brief change in mental status or consciousness to "severe," i.e., an extended period of unconsciousness or amnesia after the injury (CDC, 2002). A TBI can result in short or long-term problems with functioning independently (CDC, 2002). A TBI might occur from a bicycle or motor vehicle crash, falls, shaken baby syndrome or some other abuse, recreational and sports injuries, firearms, and roadside bombs, which is the signature injury of our current wars in Iraq and Afghanistan. TBI does not include brain dysfunction caused by degenerative conditions such as Alzheimer's disease or congenital conditions (that is, existing at or before birth) such as Downs syndrome and cerebral palsy.

Acquired brain injury takes place at the cellular level within the brain. Therefore, injury from acquired brain injury can effect cells throughout the entire brain, instead of just in specific areas as with traumatic brain injury. An acquired brain injury is an injury to the brain, which is not hereditary, congenital, degenerative, or induced by birth trauma. An acquired brain injury is an injury to the brain that has occurred after birth (Brain Injury Association of America, 2006). Acquired Brain injury (ABI) can be caused by surgery, strokes, tumors, disease, toxins, near drowning, electric shock, lightning strike, war injuries, alcohol and drug abuse, or head/brain injuries (TBI). In other words, TBI refers to injury through an external blow while ABI includes all injuries to the brain including external force. TBI/ABI can rob a person of a sense of self. At the very least, brain injury can seriously compromise quality of life. While brain injury may strike a single individual, in reality it is the entire family that bears the brunt of its destructive impact.

Often referred to as the Silent Epidemic, awareness of TBI/ABI is growing with its increasing incidence. As a result of improvements in the speed of transport to medical care as well as the advent of medical imaging (such as Cat Scans, Pet Scans and MRI) many more people are surviving brain injury than before. Consequently there are enormous effects on the quality of life of individuals with TBI/ABI and their families, as well as a significant economic effect on the

health care system. Consequences to the individual with TBI/ABI can include physical, cognitive, psychosocial, behavioral, and/or emotional impairments, which are often the cause of significant stress in peer and family relationships, as well as poor functioning in school or on the job. The financial consequence of TBI/ABI in the United States is estimated to be \$60 billion annually (CDC, 2006). The average lifetime cost of care for a person with a severe TBI ranges from \$600,000 to almost \$2 million (National Institutes of Health, 1999). This figure does not include lost earnings of the person who is injured or his/her family caregiver or the cost incurred by social service systems.

Survivors and their families face an extremely complex and potentially confusing array of services, medical professionals, and human service delivery systems. The course of rehabilitation is extensive, sometimes encompassing many years, numerous medical disciplines, social service delivery systems, and bureaucratic entities. The process of rehabilitation and community reintegration following brain injury often requires years of effort and major medical and rehabilitative expenses. Survivors of TBI/ABI emerge from the medical milieu concerned about the future but unaware and unformed of the bureaucratic and medicolegal challenges that lie ahead.

Some survivors of TBI/ABI receive time limited case management services through an insurance carrier responsible for covering the accident or through a facility-based case manager who acts as an internal coordinator of the rehabilitation team. However, once the injured person leaves the facility or insurance monies are depleted, case management (service coordination) either stops or is abruptly transferred to the family. Therefore, upon transfer to the home or community, families, by default, begin to face the reality of providing long-term support and service coordination with limited financial and emotional resources.

The importance of work to the psychosocial adjustment and health of persons with a TBI/ABI has been well established (Petrella et al., 2005). In the United States as well as much of the Western world if you ask people to describe themselves, often they will talk about their job or career. Work is a tremendously important aspect of how people define themselves. When people can no longer perform work in which they were previously engaged or are unable to work at all, they describe feeling like a piece of themselves has been taken away. The negative consequences of unemployment include depression, impaired social functioning, and various physical ailments. Considering the negative psychosocial and physical health consequences associated with TBI/ABI, which include loss of self-awareness, depression, and inappropriate social behaviors, people with TBI/ABI may be more deeply impacted by unemployment than the general population.

Having a job is not only important for economic stability, but being employed increases self-worth and fulfillment. Russian artist Marc Chagall wrote, "Work isn't to make money; you work to justify life." Returning to work after a traumatic brain injury is a prominent concern for most survivors. Research and experience from professionals and family members suggests that many individuals can make a transition back into work if they receive support from employers, colleagues, and family members. Supportive efforts, patience and persistence are extremely valuable in helping survivors of TBI/ABI obtain success in their work.

Survivors of brain injury typically experience rapid improvement in the first three to six months following injury. After this period many individuals become frustrated when they continue to be faced with cognitive and behavioral symptoms. Kreutzer, J.S. and Kolakowsky-Hayner (2001) report that individuals who sustained a brain injury and adjusted well possessed the following traits:

- They accept that they will not be the same person they were before the brain injury
- They readily acknowledge personal limitations
- They do not get angry with themselves because they are not doing better
- They set attainable goals and develop a pattern of success
- They focus more on what they have and less on what other people have
- They learn to appreciate unpaid activities such as visiting, cooking, housekeeping, gardening, and hobbies
- They focus on building strong relationships with members of their family
- They have supportive and accepting family members who recognize their positive features

Without a national registry for TBI it is impossible to say how many individuals living with a brain injury are in the workforce. Estimates vary widely, ranging from as low as 12.5% to as high as 80% who do not return to work (Greenspan et al, 1996; Ip et al, 1995). And the problem is exacerbated among people who are injured more severely. Professional vocational rehabilitation counselors believe that the focus should not be on whether one can find a job but rather how long one stays on a job.

For people with brain injury, returning to work plays a critical role in recovery. Whether the brain injury is mild or more severe, many obstacles can prevent people with brain injury from successfully finding and keeping a job. Looking for job leads, keeping track of appointments, and going on interviews is frequently overwhelming. On the job, adapting to change and interacting with co-workers may become a problem. Forgetting a meeting, giving a customer the wrong change, or not understanding a co-worker's joke may lead to losing the job. These are just a few of the challenges that persons with brain injuries face trying to regain their places in the world of work. Not only must they learn to cope with the loss of the person they were before the injury and its impact on their self-esteem, but they must also adjust to a new and changing personality with limitations that are poorly understood by those around them.

There are a variety of reasons people have difficulty re-entering the work force after a brain injury. The general public, as well as employers, have little understanding about how the brain is negatively affected by traumatic brain injury, particularly when a person's outward appearance is unaffected. As a result, expectations by both the individual and the employer may be unreasonably high. Cognitive impairments that impact memory, alertness, attention, problem solving skills, organization skills, judgment, visual perception and language processing present major barriers to employment. Prior to the injury, these important capabilities were taken for granted and the individual could easily accommodate distractions, new job responsibilities and disruptions that often occur in any job setting. However, when a brain injury affects the way information is processed, even minor interruptions can create a difficulty in the individual's ability to quickly return to the task and make it impossible for some people to continue without

the assistance of a job coach to provide critical support in the areas of compensatory strategies and / or with cognitive rehabilitation techniques.

Cognitive deficits are by far the most persistent and troublesome consequence of brain injury, and often prevent individuals from returning to gainful employment. Without adequate cognitive rehabilitation to develop strategies to compensate for deficits, many will find returning to their previous job out of the question and preparing for new employment equally challenging. The cognitive deficits are further eroded by fatigue, and in competitive employment, people are expected to put in an eight-hour-day. Even when working part-time, there may be no provision for rest periods and thus people are unable to compete in the job market.

In a job setting, workers are expected to get along with co-workers. Many individuals with brain injury have lifelong problems with interpersonal skills and difficulty relating to co-workers in an acceptable manner. Inappropriate behavior can be a problem, and decreased social judgment cannot be tolerated in most work settings. The emotional instability that contributes to mood swings creates a hardship for co-workers, particularly ones that knew the individual before the injury and are puzzled about the changes.

Individuals with motor impairment may experience less difficulty in seeking employment due to the public's better understanding of physical disabilities. Again, though, the unseen cognitive deficits may result in higher than attainable expectations.

Family involvement in the rehabilitation process is critical to understanding ways the injury affects cognition and behavior. It is particularly important that the family and individual with brain injury confer with a Neuropsychologist regarding the preserved abilities, and fully understand how residual deficits may limit choices in the future. Many rehabilitation facilities, particularly transitional or community re-entry programs, focus on pre-employment assessment and preparation for re-entering the work force and/or planning for the first job in the case of students leaving the school system.

When the individual with a brain injury has finished rehabilitation, if they are able to receive such services, the next step is Vocational Rehabilitation. The support and guidance they receive there will determine their future successful job retention. Studies have found that more years of education resulted in higher successes for returning to work, followed by age, attorney involvement, mandated vocational rehabilitation, and early access to rehabilitation services (Blackwell et al, 2003; Kreutzer, et al, 2003). Additional research has shown that individuals who have been rated the most difficult to serve (relating to locating work with, and once employed, job retention) were younger clients who had problems with visual and fine motor skills, and lacked numerous other work-related skills (Wehman et al 2005). For this group, and others who find placement difficult, but who have substantial natural supports, self employment is one solution to the employment barriers they face.

Best Practices Reasonable Accommodation for People with Brain Injury

A brain injury is different from many other disabilities because the onset of the injury can be traumatic and occur suddenly. We are all susceptible to brain injury at any time. This brain damage can result in permanent, irreversible damage, which can affect tasks and things typically done in the past with great ease.

An injury sustained often results in an increased need for support in the following areas:

- physical capacities (the way we move and manipulate things);
- behavioral and emotional capacities (the way we act, tolerate, and feel);
- and cognitive capacities (the way we think and process information).

The first rule of thumb when attempting to determine ways to increase the accessibility of human resources policies and practices within a company and to accommodate an individual who has sustained a brain injury is to recognize that not all brain injuries result in the same support needs. For example:

- one individual may have no difficulty reading an application form, while another may have a vision problem resulting from his/her brain injury which affects his/her ability to read.
- a right-handed applicant with limited use of his/her dominated hand or arm as a result of the brain injury.

Some effective accommodation strategies may include:

- Allowing the person to complete the application without time constraints;
- Allowing the person to take the application home and have assistance filling it out;
- Mailing the application to the candidate upon request;
- Offering the services of someone in the office to assist in completing it.

There are a number of adaptations that can make a task easier and save time, thereby enhancing productivity on the job. Simple accommodations can make a person with a brain injury more productive and ease their workload. Reasonable accommodation is defined as modification or adaptation of a job, employment practice, or work environment that makes it possible for a qualified person with a disability to apply for a job, perform an essential function of the job, or access a benefit of employment. Employers should provide necessary and reasonable accommodations from the first point of contact with a person with a disability, generally the application screening process as well as on the job; in training; on the worksite; and when considering promotions and layoffs. If job duties change, new accommodations may need to be made.

Historically it has been found the 75% of persons with TBI who return to work will lose their job within ninety days if they do not have supports (National Association of State Head Injury Administrators, 2006). Ninety days is when VR usually closes a case. Studies have shown that even after an individual with a TBI is successfully employed through VR services they may need help later when adapting to changes in job or life situations. The three common reasons individuals need help are: loss of support system (which is usually in the recovery and

adjustment phase and not during employment and independent living phase); change of job duties or change of manager and job expectations which requires re-examination of accommodations and strategies; and upward mobility when the individual is given new responsibilities and challenges requiring re-examination of accommodations and strategies.

The individual who requests an accommodation has lived and perhaps worked with the disability and may already have identified what accommodations work best for him/her. The accommodation must be individualized based on the severity of brain injury, just as support needs are individualized. The process of identifying and selecting an accommodation should be a dialogue between the individual and the employer. The accommodation may be able to be provided using easily identified supports (low tech) or may require the use of more intensified and expensive supports (high tech).

There are a variety of job-site strategies people with TBI can use when returning to work, such as: job coaching and supported employment. Understanding challenging behaviors and creating strategies to help support people with brain injury in the workforce can significantly increase job retention (Job Accommodation Network, 2005 & 2006; Mayo Clinic, 2000). Additional accommodations for an individual who has sustained a brain injury could potentially include a variety of support strategies such as:

Keeping Track of Important Information - Challenges with memory for recent or past events may be one of the greatest concerns for a person who has experienced a brain injury when considering returning to work. Problems with memory may significantly affect the employee's ability to learn, remember new information, and maintain adequate skills needed for successful employment (Warren, 2002).

- *Behaviors might be:* being late for or missing meetings, appointments, or deadlines; difficulty learning or remembering new information; poor follow through or ineffective task completion, particularly for non-routine tasks.
- *Possible strategies and accommodations might be:* Memory logbooks, calendars, adaptive technology, including handheld and notebook computers, audio-tapes, or electronic/computer reminders, watches, timers, job checklists and cue cards, tools to assist the person read such as a ruler or piece of paper with a window cut in it, smaller job steps to improve sequencing, mentoring by a co-worker or retired worker.

Minimizing Fatigue and Maintaining Energy – Physical and mental fatigue is common among people who have a brain injury. It may result from the brain injury itself, or from other injuries associated with the brain injury. Activities that once were performed with little or no effort may now require a great amount of energy, which often results in the person experiencing an overwhelming sense of tiredness (Mayo Clinic, 2000).

- *Behaviors might be:* decreased energy level; tired appearance; forgetfulness or distractibility; difficulty concentrating; easily overwhelmed; decreased quality of work.
- *Possible strategies and accommodations might be:* Reduced workday or week, job sharing, scheduled break time, and scheduling demanding job tasks early in the day.

Maintaining Attention and Optimizing Concentration – People who have experienced a brain injury often require greater effort to concentrate or pay attention to one task for an extended period of time, or multiple tasks at the same time. This concern is often complicated by the presence of distracting stimuli in the work environments (Warren, 2002).

- *Behaviors might be:* difficulty multi-tasking; reduced attention span; appears distracted or preoccupied; delayed decision making process; misses key details.
- *Possible strategies and accommodations might be:* when options are possible, give tasks that are of particular interest to the employee; have employee work on one task at a time; make eye contact when speaking with employee .provide a written agenda for meetings; as needed, refocus employee's attention to the details of the activity; keep abrupt changes to a minimum; ask employee to repeat important information; explore options to take shorter, yet more frequent breaks; allow use of headphones or earplugs to drown out external noise; plan for employee to have uninterrupted work time; divide large assignments into smaller tasks and steps; keep focus on essential job functions that are clearly stated; work with employee to develop a checklist of steps for new or complex tasks; decrease distractions by having workspace away from main thoroughfare, eliminating noise as much as possible, encouraging an uncluttered work space, when possible, providing a cubicle or private space.

Staying Organized – People who have sustained a brain injury may have greater challenges with planning, prioritizing, and staying organized. This may become more pronounced with increasingly complex job activity (Warren, 2002).

- *Behaviors might be:* difficulty in sequencing or planning; clutter work space; decreased attention to details; difficulty determining what order to complete tasks.
- *Possible strategies and accommodations might be:* Calendars, established routines during the day and across days, scheduled review of progress on job assignments at designated points in day or week, provide clear and detailed verbal and written description of tasks, use PDA or appointment book, provide picture diagrams of problem solving techniques such as flow charts, changes in lighting or office location to minimize distractions, filing systems.

Accommodating for Physical Abilities - Pain, reduced endurance, mobility and problems with balance are common among persons who have experienced a brain injury. It is also common to have secondary injuries, resulting in additional physical limitations.

- *Behaviors might be:* Difficulty maintaining balance, cruising or supporting self on furniture or walls, difficulty staying in one position, taking extra time and energy to get around, difficulty focusing on task due to pain.
- *Possible strategies and accommodations might be:* Wheelchair-accessible facilities, ramps, handrails, raising table heights, large phone, enlarged keyboards or computer screens, computer keyboard guards, electronic communication systems, telecommunication device if the person has difficulty with speech or hearing.

Managing Stress and Emotions - Emotional changes are very common in persons who have sustained a brain injury. In addition to the brain injury itself that might affect the person's emotional functioning, the person may encounter new stressors after the injury that challenge his

or her emotional stability. Stressors that the person might once have managed effortlessly may now result in more intense emotional reactions (A. Raber, personal communication, April 24, 2006).

- *Behaviors might be:* Mood swings including anxiety, sadness or irritability; inappropriate laughing or crying; low frustration tolerance; fatigue; depression.
- *Possible strategies and accommodations might be:* Generate an initial work schedule with a gradual increase of hours to decrease stress and anxiety about returning to work; give periodic praise, positive reinforcement, and constructive feedback; allow personal telephone calls during work hours to professionals to access needed support; provide sensitivity training to coworkers; allow the employee to take 5 minute breaks as needed to use stress management techniques; recognize your own emotional reactions to the person with the brain injury; remain calm, assured and confident if an emotional reaction occurs.

Facilitating Communication - The way a person communicates often changes after a person has experienced a brain injury. Difficulty in receiving and expressing ideas may be affected by challenges with understanding language, and in producing speech (Mayo Clinic, 2000)

- *Behaviors might be:* Not paying attention to or responding to another person's conversation, questions, or comments; difficulty finding the words to explain a situation; long pauses between thoughts in conversations; misinterprets what is said; difficulty following conversations and/or reading body language; introduces a new topic abruptly; slurred speech; speaks too loudly or softly, making it hard to understand his or her message; speaks too rapidly; does not readily give listener a chance to speak; stands too close or too far from people when talking.
- *Possible strategies and accommodations might be:* Designate a point person who understands the employee and can facilitate communication between employee and co-workers; have a set agenda and structure to meetings; spontaneous conversation can be difficult; encourage the individual to participate, for example, "What do you think about that?"; give the person time to organize his or her thoughts and to respond to questions or requests; give the individual your full attention and allow time for him or her to complete their thought; paraphrase what the person has said, such as, "Do you mean?"; assure the individual is paying attention, reduce distractions before speaking, and emphasize the important information; be clear and concise; politely interrupt and ask employee for a chance to speak if the employee is talking at length; clarify new topics as they come up and offer to repeat what was said or answer questions; tell employee you did not understand and ask him or her to repeat the statement; establish and use consistent gestures or cues; for example, cup your hand to your ear as a reminder to speak louder; ask the person to maintain a comfortable distance when having a conversation.

A number of successful job characteristics have been identified for individuals with TBI in a variety of settings, including high technology, scientific laboratories, self-employment, and government agencies. However, jobs with the following features have greater success: regular daily schedules, routine tasks, low levels of distracting noise and light (fluorescent lights may be especially distracting), limited number of co-workers and social contacts in a work day, regular breaks, access to memory aids.

State of the Nation

Currently, the only common program for people with TBI/ABI nationally is Vocational Rehabilitation (VR) (Goodall et al 1994). VR services are provided by the Rehabilitation Act in every state. Although the names may differ depending on the state in which a person resides, the services offered are the same. To be eligible for VR services, an individual must have a disability that impedes employment, and it is expected that from rehabilitation intervention there is a reasonable chance for successful re-entry into the work force.

When seeking assistance from VR, it is important that individuals with TBI/ABI take a family member or friend with them to assist them through the process of intake interviews, appointments for evaluations and development of the Individual Written Rehabilitation Plan (IWRP), a plan which outlines the goals mutually determined that may lead to employment. Some services provided by VR may include:

- training, such as training for a trade, technical or business school, college or on-the-job training;
- physical aids such as hearing aids, braces or medical services;
- assistive technology, such as computers or other devices and accommodations to help you perform a job;
- tools or equipment to perform your job, and transportation or personal assistance; and
- job placement assistance with leads, as well as help with filling out applications and interviewing.

The VR counselor may schedule appointments for evaluations and assessments to determine preserved abilities that may support employment. It is vital that all appointments be kept and all responsibilities be carried out. If the client does not cooperate with the planning, VR will terminate the case. That is why it is so important to have supportive individual accompany the individuals with TBI/ABI to all appointments and help with scheduling to ensure compliance of the client.

Many other state agencies and non-profit organizations provide services that enhance quality of life for individuals with brain injury. The federally mandated Centers for Independent Living provide a menu of services, i.e., independent living skills training, case management, counseling and peer support. The State Brain Injury Association, Goodwill Industries, Easter Seals, Catholic Community Charities and Jewish Family Services, as well as many sheltered workshops throughout the country, offer opportunities for individuals with disabilities to use their skills in a productive manner.

Some people are concerned about loss of Social Security benefits if they return to work; however, there is a plan whereby an individual can work for a period of nine consecutive months (a trial period) without loss of benefits. Arrangements can also be made to continue Medicare coverage even when Social Security disability benefits are terminated.

For some individuals with TBI/ABI, returning to work or entering the work force may not be an option due to the severity of the injury. However, even when presented with these barriers to

employment, many families have creatively developed cottage industries, incorporated individuals into family businesses, and/or arranged for satisfying volunteer opportunities to ensure the individual is a productive member of society.

Work is an achievable goal for most individuals after brain injury, but it takes some time and effort to find the right niche into which the individual can feel needed and proud of a job well done. Returning to work following a moderate or severe brain injury is a particular challenge. A survey conducted by the National Association of Protection & Advocacy (2005) reported that obtaining vocational supports and employment was the top concern for people who experienced a traumatic brain injury. A referral to VR for ongoing vocational supports and services should always be considered for a person with a moderate or severe brain injury.

Traditional vocational assessment tools that factor in speed and accuracy into an individual's score will penalize an individual who is motorically slow, or who processes information slowly. Experts in the field of vocational rehabilitation recommend the use of situational assessment or work tryouts or trials for individuals with brain injuries. Additionally, studies suggest that when completing a vocational intake for any new client regardless of the presenting disability, the counselor should inquire if the individual has ever experienced a blow to the head with or without a resulting loss of consciousness and construct the rehabilitation plan to accommodate any resulting sequela. The degree of physical injury does not determine the degree of difficulty related to workplace functioning. Even mild injuries can have an impact on work performance. Vocational specialists need to be cautious when reading medical reports that discuss severity of injury or when they discuss the client's injury with the family. The medical classification of mild to severe does not directly relate to or predict the impact of the brain injury on the individual's job performance.

The following is an overview of what some of the states are doing in addition to vocational rehabilitation services for people with TBI. When possible, contacts and funding sources have been included.

Arizona

The Arizona Governor's Council on Spinal and Head Injuries has collaborated with the state Vocational Rehabilitation program since 1999 to establish and maintain a group of TBI Specialist VR counselors. The Council and VR jointly created a Memorandum of Understanding that details the structure and expectations of the TBI Specialist program within VR. VR and the Council share funding responsibilities for the counselor positions and for client service dollars. They currently have four full-time and two part-time Specialist positions and are in the process of creating two more. The Council provided training for the TBI Specialists; now they are experts on Voc Rehab for consumers with TBI. The VR program triages incoming applications for services, directing the more complex cases to the TBI Specialists' caseloads. The Specialists act as consultants for general VR counselors with TBI cases that were not referred to the Specialists' caseloads. The Council continues to sponsor TBI training for the VR general caseload counselors; the TBI Specialists are presenters at these training events, along with community clinicians and other related professionals. In addition, the TBI Specialists provide technical assistance to the general VR counselors in a variety of ways, including periodic case staffing meetings in which the counselors can raise questions concerning specific cases.

The Council conducts an annual program evaluation of the TBI Specialist program. The methodology, developed and conducted by an independent evaluation professional, includes a review of all TBI-related client data from the VR data system; interviews with consumers whose cases closed within the year under study; interviews with TBI Specialists and supervisors; and a review of activities undertaken in response to the previous year's evaluation and recommendations. Once the report is completed, the Council hosts a TBI Roundtable in which TBI Specialists, supervisors, Program Managers, and Council representatives review the details of the report, discuss the implications and generate recommendations for the coming year to improve the program further. (azheadspine.org/brain.html)

Florida

Florida's Brain and Spinal Cord Injury Program (BSCIP) is teamed with the Division of Vocational Rehabilitation and the Brain Injury Association of Florida to improve the referral process and ultimately employment outcomes. Florida conducted a one year federally funded grant project from 2004-2005 entitled *Realistic Employment Strategies and Ultimate Long-Term Success* which included: a cross agency agreement on referral criteria---Explicit pre-referral protocols; continuous support; Community Advocate Teams; client/family/staff agreement on goals; and strategies-Person centered planning. The project was expanded in 2006. to include more individuals with brain injury with more information available in the near future about the expanded project. For more specific information, you may call Kris Shields at 850.245.4444, Ext. 2681 after January 1, 2007.

Maryland

Maryland has created several training modules to train state VR counselors and other employment specialists. The trainings were funded by Maryland's TBI Demonstration and Post Demonstration Projects through the Health Resources and Services Administration (HSRA) federal grant program. Several training modules were created to train state Division of Rehabilitation Services counselors and other employment specialists. The Vocational Module is a three hour training. The PowerPoint Presentation is titled "*Vocational Issues After Brain Injury*" that can be downloaded from www.tbicac.nashia.org/tbics/download/MD--TBI_vocational_module.ppt or a hard copy can be purchased from the Brain Injury Association of Maryland, www.biamd.org. These training modules have been offered throughout the state. The training, a PowerPoint presentation that can be done in person by the Brain Injury Association of Oregon (BIAOR), combines an overview of TBI incidence, prevalence and sequela along with an introduction of a TBI, screening tools and a review of strategies VR counselors can provide to their consumers and employers to provide support in the work place.

Missouri

Andrea Buening, of the Brain Injury Association of Missouri, states that people with TBI in Missouri are the only disability group that can gain VR services to locate part-time employment. The issue of fatigue is accommodated for by allowing the service to work with the survivor with this limitation. Any consumer using VR services can reopen their case at any time should they wish to after VR has stepped out of the picture if they feel that they have not achieved their vocational potential. The Missouri VR uses Supported Employment agencies to monitor and

follow up with the person with TBI as well as assisting with resumes and transportation to appointments.

Ohio

Dr. John Corrigan of the Ohio Valley Center for Brain Injury Prevention and Rehabilitation (www.ohiovalley.org) provides a brief summary of the study they are conducting of the IPS supported employment model: *Efficacy of the Individual Placement and Support (IPS) Model for Clients with Disability and Substance Use Disorders*.

The Individual Placement and Support (IPS) supported employment model has extensive empirical support when used with clients who are dually diagnosed with substance use disorders and a severe mental illness. The model is predicated on the belief that work skills training prior to job placement is not efficient or effective for persons with more severe disabilities, but rather real work experience with domain and job-specific support is the best method for connecting and maintaining these persons with jobs. IPS has been characterized as a "more aggressive" form of supported employment because of the rapidity with which motivated (and medically stable) clients are moved into job placements. The basic principles of IPS include the following:

- 1) Vocational rehabilitation is an integral part of mental health (including substance abuse disorders) treatment;
- 2) The goal is competitive employment in work settings integrated into a community's economy, not segregated in sheltered work settings;
- 3) Consumers obtain jobs directly, rather than first engaging in lengthy pre-employment training;
- 4) Vocational rehabilitation services are continuous and based on real work experience in the community;
- 5) Follow-along services from mental health providers are time unlimited, based on consumer need (i.e., services not restricted to 90 days post-employment as with state-based vocational rehabilitation system);
- 6) The choice of work site and related services are based on consumer preference and choice.

The IPS model is being studied for its efficacy with persons with substance abuse disorders and disability other than severe mental illness. Two sites are conducting the research: the TBI Network, affiliated with the Ohio State University College of Medicine and John D. Corrigan, Ph.D. and, the Consumer Advocacy Model (CAM) program affiliated with the Wright State University School of Medicine and Dennis Moore, Ed.D. The TBI Network serves an outpatient population of approximately 150 active consumers, all of whom have traumatic brain injury and substance use disorders. The CAM program, originally modeled on the TBI Network, serves an active caseload of approximately 280 outpatient consumers with substance use disorders and a coexisting disability. Subjects are being enrolled in a randomized clinical trial of the IPS, and will receive either 'services as usual' or the IPS intervention. Outcome data are collected at baseline, 3 months, 6 months and 12 months following initial entry into the IPS program.

Utah

The Brain Injury Association of Utah (BIAU) is currently using the SE model. BIAU has operated the Return to Work Program (RTWP) with Utah Vocational Rehabilitation since 1995.

The program provides a unique and supportive environment to promote individual confidence and self respect. The RTWP assists individuals in gaining work related skills, increasing stamina and developing appropriate work conduct. The RTWP offers a unique three-part program that includes Assessment, Individualized Training, and Employment Services (Supported Job-Based Training / Supported Employment). Return to Work Program is adapted to help individuals with brain injuries prepare to enter the work force by: Identifying marketable skills; Improving underdeveloped skills; and Coping with the affects created by the injury (www.biau.org/who/who_return.html).

Vermont

Erin Weaver, Department of Disabilities, Aging & Independent Living, Division of Disability and Aging Services, TBI Program with the State of Vermont states that some VR Counselors in Vermont have been trained in a TBI certificate program through Assumption College, Colchester, VT. Also, the TBI program has consulted on various cases where individuals with TBI are returning to work. There is also a small amount of money every year through an agreement with VR called TBI Set Aside funds under Title VI-C (www.dad.state.vt.us/dvr/public_notice.htm) that is earmarked just for individuals with TBI returning to work to help cover Neuropsychological evaluations, targeted case management, or short term employment supports/job coaches. In Vermont individuals with TBI and their families contact the Division of Vocational Rehabilitation TBI Program Coordinator for information and referral services. Individuals with TBI who are 16 and older and who are recipients of Medicaid may be eligible for services under the Home and Community-Based Medicaid Waiver for individuals with TBI (TBI Waiver) established in 1994. The TBI Program Coordinator and staff provide in-take, assist the treatment team in the development of an individualized treatment plan, and arrange and coordinate resources under this Rehabilitation and Person-centered TBI Waiver. Services offered under the waiver include case management, rehabilitative services, community supports, assistive technology, environmental modifications, crisis support, respite, psychology and counseling supports, and employment supports.

Vermont has also developed a supervised apartment program to support individuals with balancing job and home. Services for children are coordinated between Department of Education, Department of Aging and Independent Living, and Division of Vocational Rehabilitation TBI Program.

Vermont's TBI Program has developed and established a unique collaborative and supportive partnership with the Advisory Counsel, Brain Injury Association of Vermont, and Protection and Advocacy Program. The unified mission of this alliance is to develop statewide infrastructure for a comprehensive system of culturally competent, person/family centered TBI supports and services. (Contact Erin Weaver for further information: erin.weaver@dail.state.vt.us)

Virginia

The Virginia Commonwealth University TBI Model System is conducting a project on, *Return to Work After Traumatic Brain Injury: A Self-Directed Approach* supported by the National Institute on Disability and Rehabilitation Research (NIDRR), to provide a more accurate description of the obstacles to employment, vocational needs, and employment outcomes.

(www.neuro.pmr.vcu.edu). The purpose of the Virginia Commonwealth University RRTC on Workplace Supports and Job Retention is to study those supports that are most effective for assisting individuals with disabilities maintain employment and advance their careers. The primary stakeholders for this project are persons with disabilities, with an emphasis on those who are unemployed, underemployed, or at risk of losing employment. (www.worksupport.com)

Oklahoma

The Oklahoma State Human Services Agency developed a curriculum for training VR professionals and paraprofessionals in the unique needs of clients who have experienced brain injury, *Oklahoma Vocational Rehabilitation Training Curriculum for Brain Injury*. The 2001 curriculum builds upon basic VR instruction to address brain injury. Key features are that it is a focused one-day training program, and the content is appropriate for all VR professionals and paraprofessionals. This program, funded by the HRSA TBI Project is available full-text at <http://www.tbifac.nashia.org/tbics/download/OKcurriculum.pdf>.

Additional information, available to access by all interested individuals and agencies, from various states, non-profits and National Institute on Disability and Rehabilitation Research (NIDRR) projects are:

- The National Association of State Head Injury Association (NASHIA) has broadcast a Web cast entitled "*Using a Team Approach to Employment of People with Traumatic Brain Injury*." In the Web cast a panel discusses the impact of traumatic brain injury on an individual's ability to get and keep a job, and how a team approach to providing employment services for people with TBI is used. Find an archived version of the Web cast at www.mchcom.com/archivedWebcastDetailNewInterface.asp?aeid=340
- "Understanding Brain Injury: A Guide for Employers" was funded by Minnesota Department of Economic Security (now the Department of Employment and economic Delivery), National Institute on Disability and Rehabilitation Research (NIDRR) and Mayo Foundation. It is available at <http://mayoresearch.mayo.edu/mayo/research/tbims/employers.cfm>.
- The Rehabilitation Research and Training Center on Traumatic Brain Injury Interventions (RRTC) and the New York Traumatic Brain Injury Model System (NYTBIMS) at Mount Sinai School of Medicine and The Mount Sinai Medical Center have produced a publication titled "Vocational Rehabilitation, Traumatic Brain Injury, and the Power of Networking." This booklet, revised in 2003, is designed for professionals and others interested in expanding the range of vocational possibilities for individuals with TBI. The key idea in this publication is that the complexity of needs typically associated with TBI requires non-traditional responses if vocational success is to be achieved. It's available at www.mssm.edu/tbicentral/resources/publications/vocational_rehab.shtml
- The University of Washington TBI Model System is conducting a project on "Risk of Unemployment after Traumatic Brain Injury". This project is looking at unemployment after traumatic brain injury and is focusing on people who were working before their

injury. The project is to look at injury severity and cognitive abilities to see how they affect employment status. (<http://depts.washington.edu/rehab/tbi/projects.html>)

The State of the State

In Oregon vocational rehabilitation is provided by Workers Compensation if you are injured on a job that provides Workers Compensation Insurance, private insurance which states that cognitive and rehabilitation services are covered under that policy, private pay, and the federally funded VR program, Office of Vocational Rehabilitation Services (OVRs). There is no doubt that the TBI population has unmet needs. Services for people with TBI in Oregon could be strengthened through Oregon's Office of Vocational Rehabilitation Services (OVRs) with specialized training for counselors, the development of partnerships with service providers and identification of additional funding sources. Currently in Oregon, people with TBI accessing OVRs work with a vocational rehabilitation counselor. The services provided depend on the individual counselor's understanding of brain injury, the counselor's connections to an interdisciplinary team of professionals who are able to assist in returning the client to a competitive employment position (counselor, speech-language therapist, occupational therapist, physical therapist, neuropsychologist), and the financial resources available. Financial resources are limited and there is not enough money to hire these people for every TBI client. Currently Oregon does not have a program in place giving counselors guidelines specific to TBI. The client will only receive a supported employment type of service if an their counselor has an understanding of TBI, the connections and the funding.

Currently OVRs counselors will evaluate the client by referring them to a neuropsychologist for an assessment. The counselors will work with the brain injured client on compensatory strategies such as memory book and anger management techniques. They will then hire a job developer to help them find a job and then a job coach who will work with the employer to help them understand issues and best practices for each individual client. The job coach will work with the employer and client to find solutions to working difficulties such as anger and behavioral issues which are common in this population. Natural supports such as family, church, and the employer are encouraged to help the client be successful. Working within the SSI/SSDI guidelines to enable income from both SSI/SSDI and employment, clients are frequently advised to create an account for employment related disability expenses to shelter some of their earning to pay for additional services such as a job coach. Generally, although not always, after ninety days of employment the case is closed; however, the client has a say in this, and the case does not have to be entirely closed even if the client has completed 90 days of successful employment. This is frequently not long enough to determine how the client is going to do on the job. Through post-employment services, a case can be reopened to fix things that go wrong, but this requires additional motivation that people with brain injury frequently don't have.

Conclusions and Recommendations for Oregon

Both traumatic and acquired brain injury can leave an individual with a number of persistent impairments that interfere with finding and keeping a job. These problems may be cognitive (for example, difficulties with attention, memory, communication, reasoning, and problem-solving), physical (such as weakness or lack of coordination in arms or legs, impaired vision, fatigue, sleep problems), emotional problems (for example, vulnerability to depression, difficulty

controlling anger or anxiety), or behavioral (for instance, being impulsive, difficulty initiating or sustaining behavior). There are other social barriers to getting a job after TBI/ABI. Many people including employers and co-workers do not understand TBI/ABI and may have fears or concerns about employing or working with a person with TBI/ABI. If a person with TBI/ABI cannot drive, alternative transportation to and from work may not be available. Frequently people with less visible cognitive, emotional, or behavioral impairments may have difficulty explaining their disabilities and limitations to a VR counselor. In fact, many people with a mild TBI do not even know that that is what they have. The traditional VR system depends on the person applying for services to be motivated to work. Most people with TBI/ABI that apply for VR services are very motivated to work. However, their cognitive, emotional, and behavioral problems may make them appear unmotivated or even hostile at times, resulting in their case being dismissed by the VR counselor. Training should be available to the VR counselors on TBI. The BIAOR has training DVDs, Tutorials and subject specific PowerPoint presentations that can be used in an individual or group setting and are available free of charge.

Desired Outcome

Oregon currently uses a supported employment model for those individuals identified as developmentally disabled. The Supported Employment model facilitates competitive work in integrated work settings for individuals who, because of the nature and severity of their disability, need ongoing support services in order to perform their job (Wehman, Targett, 2006). Supported employment provides assistance such as job coaches, transportation, assistive technology, specialized job training, and individually tailored supervision. Oregon currently does not offer a supported employment program for people with TBI. BIAOR supports using the supported employment model which includes employer and family training. Studies have shown that supported employment services can make a dramatic difference for people with TBI/ABI to obtain and retain jobs. Supported employment services can be a relatively inexpensive program to enable people with TBI/ABI to get work and contribute to society in ways that more than offset the cost of these services. The supported employment model includes skills training and support at the job site provided by an employment or rehabilitation specialist, while the individual is engaged in competitive employment. This allows employment specialists to help individuals overcome their inability to retain skill, as well as help with other social, behavioral and physical impairments which traditionally have impeded them from maintaining employment.

The major characteristics of a supported employment model are:

- **Paid Employment**-- Job placement made after an analysis of potential work environments, as well as the individual's abilities and support needs. Wages are a major outcome of supported employment. Work performed must be compensated with the same benefits and wages as other workers in similar jobs receive. This includes sick leave, vacation time, health benefits, bonuses, training opportunities, and other benefits. Employment must be for at least 18 hours per week.
- **Integrated Work Sites**--Integration is one of the essential features of supported employment. Individuals with disabilities should have the same opportunities to participate in all activities in which other employees participate and to work alongside other individuals who do not have disabilities. If possible, employer performance standards related to quality and quantity of work should be achieved daily.

- Ongoing Support--A key characteristic which distinguishes supported employment from other employment programs is the provision of ongoing support for individuals with severe disabilities to maintain employment. On-the-job site training and advocacy efforts individually determined for each worker. After the individual reaches competence, ongoing monitoring of work performance and social adjustment with additional intervention as needed.

Studies conducted in Oregon at OHSU (Wehman, et al, 2005; Chesnut, et al., 1999) and other states have reviewed various approaches to employment. The evidence indicates that supported employment can improve the vocational outcomes of TBI/ABI survivors. In fact, the strongest studies supported the effectiveness of early intervention, compensatory cognitive rehabilitation, and supported employment. A number of studies by Paul Wehman, PhD, indicate that persons with TBI/ABI who receive supported employment services are successful in obtaining and maintaining employment. These studies include: *Productive work and employment for person with TBI. What have we learned after 20 years?* (2005); *Vocational Rehabilitation for Persons with Traumatic Brain Injury*. (1990); *Supported work model for persons with traumatic brain injury: Three case studies*. (1998); and *Supported work model for person with traumatic brain injury: Towards job placement and retention*. (1988).

Because of the many barriers, most people with TBI/ABI are not able to find and maintain paid employment. Some people with TBI/ABI have such severe disabilities that they will never be able to work. For others, volunteering, education, or other unpaid activities may be rewarding options. However, special projects and programs show that many people with TBI/ABI who were previously thought to be unemployable can be employed-if the system works for them. A person with TBI/ABI with the help of their significant others or other advocates may be able to make the system work for them and overcome barriers to employment. Self employment, telework, temporary staffing, and independent contracting type of work arrangements be developed and models applied that go beyond traditional employment. These alternative work arrangements are becoming increasingly prevalent in the workforce and offer advantages and opportunities for many individuals with brain injury. Oregon VR has used these options, although infrequently. If the natural supports are strong and secure, some individuals have been supported through VR in self-employment.

The BIAOR supports the use of a supported employment model for people with TBI/ABI. BIAOR estimates that initial implementation of this model for people with TBI/ABI would take about twelve months. The BIAOR has been working on a Return to Work program and has been in discussion with the Portland area VR offices. Training for all state VR would take about six months. The basic training programs have already been developed in Oklahoma and Utah and might be able to be revised to fit an Oregon program. Modifying the existing Oregon DD supported employment model to include TBI/ABI, with input and guidance from the Brain Injury Association of Oregon and other states that are successfully running supported employment programs for people with TBI, would make the delivery time much shorter. Resources for assistance are already in place nationally for support and collaboration with other states through The National Association of State Head Injury Association (NASHIA), the Brain Injury Association of America and their affiliates, Center for Disease Control (CDC), and National

Institute on Disability and Rehabilitation Research (NIDRR), to name a few. Within a one year period this program could be in place. Following is a proposed timeline for implementation if funding for the program, training and long term follow-up can be secured.

Activity	Timeline
Select TBI Supported Employment Committee	Month 1-2
Review information on any existing programs in Oregon and throughout the country, identifying problem areas encountered and solutions developed	Month 1-3
Develop Supported Employment TBI Model-incorporating what has worked successfully in the DD supported employment program and successful activities from other states	Month 2-5
Create Training Program for VR and other state and service providers, strengthening partnerships with those responsible for employment outcomes and services	Month 5-6
Trainings offered to VR personal statewide which would increase access to, and knowledge of benefits available	Month 6-10
Identify multidisciplinary Teams regionally, establishment of a fee-for-service process for purchasing services needed through existing connections and brokerages, OHP, working with current providers such as Centers for Independent Living, Goodwill, and the Brain injury Association of Oregon, administer training, increasing capacity of providers to deliver supported employment services	Month 6-10
Begin trial activities, training people with TBI/ABI and their families, and placement	Month 10-12
Identify problem areas and create solutions	Month 10-12
Begin program with all TBI/ABI individuals	Month 13
Continue Training as needed for new personnel	ongoing
Evaluation at end of year would assess employment outcomes - Supported employment services would achieve the following outcomes for people with TBI/ABI: opportunity to earn equitable wages and other employment-related benefits, development of new skills, increased community participation, enhanced self-esteem, increased consumer empowerment, and quality of life. The types of supported employment services used would depend on the needs of individual consumers.	Month 24

Summary

For people with TBI/ABI, who have cognitive, physical and behavioral problems, a supported employment model using an interdisciplinary team has been shown to be the most effective model to obtain and retain employment. With this model already in use in Oregon, adapting it for use in the TBI/ABI population could be achieved in a two year period. The supported employment model could be used to work with people TBI/ABI in urban and rural areas improving employment outcomes and life satisfaction among the TBI/ABI population. Although funding has not been identified at this time, pursuing funding sources is recommended for this program. A beginning would be looking at the funding sources in the various states, a number are included in this report, for grant ideas and legislative actions; combining financial resources from OHP, waivers, VR and SPD to create and support the interdisciplinary teams.

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