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Counseling Individuals Post Acquired Brain Injury

Considerations and Objectives

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“I was just crossing the street, carrying bags full of presents to my friends for the holidays when I was hit by a car.”

“I just got off the treadmill and I noticed that the right side of my body wasn’t working right and I had trouble speaking.”

“My partner and I fell 80 feet when our equipment broke. He died and I sustained a brain injury.”

“I was on the way home from an Honor Society meeting in 12th grade and was hit by a car right near my school.”

“I got into a car with a girl who had been drinking and taking pills and we drove right into a tree.”

“I was working alone in my law office when someone came in and hit my head with a baseball bat several times.”

“I lost oxygen to my brain after a heart attack I experienced when I was at the local library with my children.”

“I started having headaches and experiencing these odd sensations where I would smell the scent of pine. I was diagnosed with a brain tumor.”

“I was on vacation with my wife when our car was hit by a drunk driver, and as a result of the accident I totally lost my vision in addition to sustaining a brain injury.”

“I told a lot of people that I fell down the stairs because I was carrying too much laundry, but my friends told me that I fell because I had been drinking too much.”

These types of introductions are very familiar to members of the neuro-rehabilitation team. Although survivors generally don’t remember their injury, they usually are able to describe what others told them occurred. Survivors of acquired brain injuries (ABIs) all need to cope with the suddenness of an unexpected, calamitous injury. In counseling brain injury survivors, the clinician encounters individuals whose characteristics vary across a multitude of dimensions, not limited to age, gender, cultural background, severity of trauma, or time since the injury. The clinician meets survivors whose educational backgrounds range from limited to extensive, whose personality styles range from private to demonstrative, whose coping skills are fragile to admirable, and whose support systems are uninvolved to overly involved. Whether employed as a firefighter, janitor, professor, ironworker,

physician, or fisherman at the moment of the injury, the individual abruptly becomes a brain injury survivor, trying to recapture as much of his or her pre-injury self as possible.

The exact nature of the injury will vary in terms of typicality, from the most common ABIs due to motor vehicle accidents, falls, or strokes to less common occurrences, such as unusual work accidents, random acts of violence, attempted suicides, and atypical encephalopathies, such as secondary to complications of anorexia or lithium-induced toxicity. The exact nature of the injury will also vary in terms of causal factors, number of others injured or killed, the survivor's relationship to the others involved, and how responsibility is assigned. Survivors will vary in terms of severity of challenges, from subtle to very pronounced. The framework within which the survivor views the injury will also affect his or her emotional status. All these factors must be considered in understanding the survivor and facilitating an effective post-injury counseling experience.

Counseling Considerations and Goals

Emotional and social challenges following a brain injury may be the result of organic damage, reaction to the injury, or a combination of both. Pepping and Roueche (1990) summarized various psychosocial changes that are considered organically based, due primarily to fronto-temporal injuries. These include loss of ability to show empathy, disinhibition, childish behavior, apathy, emotional lability, irritability, and suspiciousness. Typical emotional reactions to ABI seen clinically include sadness and frustration due to factors such as loss of identity, change in status, lengthy setbacks, diminished control, lack of home or work support, and loss of hope regarding the future.

Very common counseling goals include improving insight, mood, frustration tolerance, stress management, self-esteem, and the active reintegration to meaningful roles. In some situations, the counselor is able to facilitate post-ABI growth, where unexpected positive changes occur consequent to the injury.

It is critical that the entire team be aware of the impact of emotional and psychosocial changes on a survivor's recovery. Referral for counseling and/or neuropsychiatric consultation (see Chapter 6) allows the survivor the opportunity to address emotional and behavioral challenges that may be interfering with recovery.

The clinician must always be sensitive to the uniqueness of each individual, provide education and encouragement, boost motivation, be knowledgeable about cultural differences, help differentiate short- and long-term goals, and assist in creatively finding ways to eliminate barriers towards progress. The counselor should also reinforce that survivors keep notes of sessions to aid recall and actively attempt to carryover counseling goals to the home and community.

Survivors need to be able to express fears and concerns in an arena that offers trust and respect. Once trust is established and a therapeutic alliance has developed, an individual becomes more receptive to feedback. Timing and sensitivity are very important in providing challenging feedback.

The survivor often needs assistance in shifting from obsession with post-injury changes to a more productive focus that involves reframing the injury in a manner that allows the acquisition of hope regarding the future. Whereas one-to-one counseling offers more individualized attention, group counseling helps alleviate feelings of isolation and difference. Peer support is also a powerful way for survivors to receive feedback about their behavior.

The Importance of Insight

Awareness of deficit after ABI is a fascinating topic that has been researched extensively (Prigatano & Schacter, 1991; Hart & Sherer, 2005). Survivors that have good awareness of their difficulties are often active partners in the recovery process. They are disturbed by their difficulties and eager to make progress. Individuals with poor insight have significant difficulty “seeing” post-brain-injury changes and how these difficulties affect daily living skills. Some survivors are totally unaware of very severe difficulties, and see themselves the way they were prior to the injury. These individuals can pose a very serious safety risk as they may insist upon returning to activities prematurely; e.g., return to work, school or driving. Prigatano and Schacter (1991) describe the “catastrophic consequences” that lack of insight can have on employment choice and interpersonal relationships. Other survivors may have partial awareness of their difficulties, with underestimation of how their difficulties affect their performance. Reduced awareness is associated with more severe injuries and a greater number of brain lesions (Sherer et al., 2005).

Kortte et al. (2003) discuss the challenge of differentiating organic lack of awareness from psychological denial. They describe how those in denial of their deficits show resistance when shown their difficulties, whereas those with organic lack of awareness are surprised when their difficulties are pointed out to them. They found that individuals who show a higher level of denial tend to use a greater number of coping strategies aimed at avoidance. They conclude that those who engage in avoidant coping strategies instead of actively processing the trauma are more at risk for depression.

Survivors who are unaware of their difficulties will vary in terms of receptivity to feedback. Some will be willing to follow clinical recommendations despite the fact they don't see their weaknesses. Crosson et al. (1989) provided a theoretical framework for self-awareness that consists of three levels: “intellectual awareness,” “emergent awareness,” and “anticipatory awareness.” Intellectual awareness refers to the ability to recognize that particular difficulties exist secondary to an ABI. Emergent awareness refers to the ability to recognize the impact of these difficulties on everyday life. The model suggests that a person must possess some degree of both intellectual and emergent awareness before developing the third and highest level of anticipatory awareness. Anticipatory awareness refers to the ability to foresee difficulties in everyday life that could occur consequent to the injury and resultant impairments. For many, insight increases during the first few months post-injury, whereas for others it can take many years and repeated failure experiences

to build awareness. Survivors ultimately need to establish a good level of insight so they can focus on ways to work around their deficits and become effective compensators.

LG was a 19-year-old college student status post a severe brain injury due to a pedestrian accident. Her insight into her difficulties was poor, and despite the fact that she had significant impairments in selective and divided attention, short-term memory, processing speed, visuo-perceptual skills, fine motor coordination, and expressive and receptive language difficulties, she felt that she was “totally fine” and able to return to school. She had a negative attitude in all her therapy sessions, stating that she was exactly as she had been prior to the accident.

Before the injury, LG was an extremely good student, with a 3.8 GPA. At one year following her injury, the neuro-rehabilitation team felt that LG was ready to take one course at a local college with reasonable accommodations, such as extended testing in a private room and use of a note taker. LG was totally resistant to the idea of working with the Office of Disabilities and insisted that she take a minimum of four courses. Despite individual and group counseling efforts supported by her family and friends, and a meeting with another college student post-TBI who had successfully reintegrated to school on a gradual basis with reasonable accommodations, LG was uncooperative with recommendations. She thought that returning to school would mean a return to her former self.

At this point, the team and family agreed that it would be helpful for LG to return to school full-time so that she could see her true status. This was a major turning point in LG’s awareness level. Her insight finally improved as she saw for herself that she could not perform academically as in the past. She did very poorly in her classes. LG went through a period of reduced mood and increased anger at her injury and altered capacities, which was followed by a gradual shift towards acceptance. She did return to school about one year later on a part-time basis, with accommodations. Prior to relocating to Florida a few years later with her parents, LG was instrumental in assisting several other clients with reduced insight in benefiting from her experience.

As illustrated above, lack of insight can compound the deleterious effects of brain injury. Not only can it waste a significant amount of clinical time, but it can also engender conflict between the survivor, family and therapy team. The sooner the impaired awareness is addressed, the better the ultimate outcome, as a recent study by Evans et al. (2005) found. According to this study, impaired self-awareness has an early, negative effect on prognosis, warranting early intervention.

Awareness is a high level integrative activity involving the frontal lobes (Stuss & Benson, 1986). When an individual has an impaired monitor, there is a defect in the feedback system preventing proper integration of information and monitoring of responses. Studies have shown that decreased awareness is associated with lack of compliance with rehabilitation, greater caregiver distress, decreased functional status at discharge, and reduced employment outcome (Sherer, 2005). Realistic self-appraisal is critical for positive therapeutic outcomes.

One effective way to build insight is through bombardment of the individual with feedback from many different sources, inclusive of significant others, therapists, and peers. Feedback from other survivors who overcame insight challenges can be very powerful in leading unaware survivors to a breakthrough in insight. Allowing survivors to view videotaped segments of their behavior can sometimes help

improve awareness. Of course, it is clinically important to balance confrontation with support (Cicerone, 1989).

Educating survivors regarding frontal lobe insight difficulties can also be an effective insight-building tool. The survivor and primary team members can devise a list of current strengths and goal areas, to be reviewed and reinforced daily. Another way to improve insight is through performance feedback. Asking survivors to predict their performance on tasks and providing them with feedback regarding their actual performance can help improve awareness (Youngjohn & Altman, 1989).

As a final resort, some survivors, like LG, may need failure experiences in order to build insight. Another example was a legally blind client who believed firmly that he would be able to drive safely if he was put behind the wheel. He needed to take and fail numerous driving evaluations in order to be convinced that his vision precluded him from safe driving. Once a survivor becomes aware of his/her difficulties post-ABI, there is often a concomitant decline in mood (Sohlberg et al., 1998).

Mood Challenges

Lack of uniformity in defining depression has resulted in much variability in its reported frequency post-ABI. Estimates of the rate of post-TBI depression range from 14% to 77% (Cantor et al., 2005). Anxiety disorders, emotional lability, aggressive behavior, and substance abuse challenges are frequently associated with major depression post-TBI, and their co-presence is a marker for negative cognitive and psychosocial outcomes (Jorge & Starkstein, 2005). There is evidence of a biphasic course in the prevalence of post-stroke depression, with one peak occurring within the first year of the stroke and the second occurring during the second year. Depressed patients are often less motivated to take part in rehabilitation, have longer hospital stays, lower functional outcome and decreased resumption of social activities following discharge from rehabilitation (Van de Meent et al., 2003).

Neurobiological and psychosocial factors lead to a unique presentation of mood challenges in each client. Alderfer et al. (2005) cite laterality of injury, dysfunction in dorsal frontal systems, and dysregulation of serotonergic activity as primary neuroanatomic factors affecting mood. They also discuss various psychosocial risk factors for post-TBI depression inclusive of poor pre-injury occupational status, poor pre-morbid social functioning, previous history of psychiatric diagnosis or alcohol abuse history, fewer years of formal education, and female gender. They report that the rate of depression is high in the first year post-injury, although clients are at increased risk for developing depression for many decades following their injury. These researchers suggest that biological factors have an increased role in acute-onset depression, with psychosocial factors having a more significant role in delayed onset depression.

The evaluation process for all survivors with ABI should include a clinical screening for depression, with recommendations made for individual and/or group

counseling in addition to neuropsychiatric consultation, as needed. This is particularly important because a delay in treatment can negatively affect emotional and cognitive gains. Neuropsychiatric consultation is always indicated in cases of suicidal or aggressive ideation and in situations where non-pharmacological treatment has been insufficient. Scicutella (Chapter 6) discusses the differential diagnosis of apathy and pseudobular affect from mood disorders.

Even subtle changes in thinking or feeling can lead survivors to feel altered. Many express sadness and frustration due to loss of certain skills or functional abilities. They frequently describe their injury as a major marker in their lives, dividing their experiences into pre- and post-injury categories. Survivors who were high achievers prior to their injury tend to be especially frustrated by their inability to duplicate pre-injury roles. Those individuals who are able to return to work but at the cost of expending significantly more effort to achieve the same result often feel deeply saddened by this loss of efficiency. Loss of status can also occur due to an altered role at work or in the family.

Survivors frequently report decreased mood due to feeling out of control. Uncertainty about the future is particularly difficult to deal with, especially for those that were very control-oriented in the past. The enormous setback that can result from severe injuries can require many years of hard work and consistent use of compensatory strategies for success.

ABI can create a giant strain on relationships and place marriages at risk for "relationship breakdown" (Blais & Boisvert, 2005). Survivors who need to deal with divorce and separation from their children, in addition to their ABI, are at very high risk for depression.

Survivors with reduced mood post-ABI benefit most from emotional support, guidance with goal direction, and overall empowerment in their daily lives. They frequently describe the significant emotional boost they derive from success, such as doing well in a course or making active progress in therapy sessions. It is also important for the clinician to keep in regular contact with the survivor's significant others to monitor mood at home and in the community.

Cognitive-behavioral therapy (CBT) approaches (Beck, 1995) were designed to treat depression and anxiety in individuals without cognitive challenges. CBT has been adapted for use with individuals post-stroke (Hibbard et al., 1990). The efficacy of CBT has not been systematically examined in individuals with TBI (Gordon & Hibbard, 2005). A recent study (Tiersky et al., 2005) demonstrated that programming consisting of CBT and cognitive remediation showed promise in the treatment of depression and anxiety in individuals with mild to moderate TBI living in the community. Replacing cognitive distortions, such as, "I had a brain injury and am totally useless," with more accurate and adaptive interpretations has been found clinically useful in survivors of ABI. Mateer et al. (2005) highlighted the importance of integrating cognitive and emotional interventions in the treatment of individuals with ABI.

Prigatano (1999) emphasized the need for a set of guiding principles in psychotherapeutic work with ABI survivors. These include working within the survivor's subjective experience, addressing disorders of awareness, considering

pre-injury characteristics as well as recognizing the interaction between cognition and personality. He advised clinicians to “focus on the present but with a sophisticated understanding of how the past may have contributed to patients’ behaviors.”

Couples counseling is often indicated post-ABI. Primary goals include assistance with adjustment to changes and redevelopment of trust, communication, and intimacy, as well as reinforcement of empathy, flexibility, mutual support, and respect.

Group counseling, in the form of an educational/support group, can provide clients with a sense of connection to others who have gone through similar experiences. Observing progress in peers can provide a boost in level of client hopefulness. Group counseling can also help improve social interactional skills and act as a forum for mastery of strategies to regulate emotions. Survivors report much benefit from group discussions regarding adaptive ways to cope with depression and frustration. Alumni can serve as role models and mentors for survivors receiving active rehabilitation as they can provide hope and encouragement based on their post-injury successes.

Frustration, Anger, and Behavioral Challenges

Aggressive behaviors are considered common among brain injury survivors. Baguley et al. (2006) report that in the acute rehabilitation setting, aggression is associated with factors such as reduced communication skills, symptoms of post-traumatic stress disorder, frontal lobe injury, disorientation to place and time, and pre-morbid psychiatric and substance abuse history. They investigated the prevalence and predictors of aggressive behavior among clients with TBI up to 60 months post-discharge. Their primary findings were that both “depression” and a “younger age at time of injury” were the most significant predictors of aggression at 6, 24, and 60 months post-discharge, and that prevalence of aggression was at 25% following TBI at these different follow-up periods.

Survivors frequently report reduced frustration tolerance post-ABI, with overreaction to minor triggers. This represents a decrease in tolerance for levels of stimulation that were tolerated effectively in the past. As preinjury characteristics are often amplified post-injury, it isn’t surprising that those who were somewhat irritable before their injury may become significantly more so following their injury. Greatest sources of reported frustration are in relation to functional loss and restriction of autonomy.

Survivors frequently experience much anger at the source of the injury. Self-anger is noted in cases where the survivor was in some way responsible for his or her injury, such as due to a faulty suicide attempt, drug overdose, impulsivity, or negligent behavior. In cases where someone else caused the injury, the survivor’s relationship to that person and the interpretation of events that led to the injury will influence the reaction. For example, a roommate who assaults an individual on the head numerous times with a flashlight will effect a different emotional reaction

than a stranger who collides into a pedestrian due to a sudden heart attack behind the wheel. If the individual was a passenger in a car driven by a friend or family member who was driving recklessly, his or her reaction will be different than if the friend or family member was also a victim to a second driver who was intoxicated. In cases where a survivor experiences much anger related to the surrounding events of the injury, it may take several months or years to work through the anger and move forward. Although anger and self-pity are normal reactions to an ABI, when these emotions persist they can become toxic to the recovery process. Individual and group counseling can be very helpful in allowing the survivor an opportunity to ventilate anger and obtain feedback and support from others.

Reinforcement of adaptive coping strategies is critical in improving anger control and compensating for disinhibition. Impaired regulation of mood and behavior is a serious barrier to community reintegration. Survivors often need to relearn how to slow down and self-monitor during challenging interactions to prevent inappropriate outbursts or aggressive responses. It is helpful to reinforce the first-letter mnemonic COP to remind survivors of items to remember in their attempts at anger control. The *C* stands for communication of thoughts and feelings in a nonaggressive, constructive manner. Survivors are taught to try and remove themselves from situations where they feel they cannot communicate in an appropriate, nonhurtful manner. The *O* stands for constructive outlets used to help the individual handle frustration effectively, such as listening to music or relaxation tapes, physical exercise, or journaling. The *P* stands for preparation for dealing with triggers that evoke aggressive responses. In this way, the client can learn to both prevent escalation when triggered and to deescalate challenging situations that arise.

Medd and Tate (2000) studied the effectiveness of cognitive-behaviorally oriented anger management programs involving self-awareness and self-regulation training. Participants were trained to recognize and respond more effectively to their reactions to anger inducing situations. Results showed a significant decrease in the outward expression of anger by the treatment group, suggesting improved emotional self-regulation. Cicerone et al. (2005) reported that many studies have suggested, "behavioral improvement is not contingent on increased self-awareness."

Giles and Manchester (2006) discuss the value of both the operant neurobehavioral approach (ONA) and the relational neurobehavioral approach (RNA) to behavioral difficulties post-TBI. Both approaches focus on reducing disruptive behavior and reinforcing adaptive behavior. ONA involves teaching survivors to adapt to social norms within a structured environment with clear contingencies. The goal is to strengthen desirable behavior and extinguish undesirable behavior. Staff feedback is direct and authoritative. RNA targets the therapeutic relationship as a treatment variable, with the focus on promoting client motivation.

In cases where survivors are having difficulty controlling their behavior in therapy sessions, a behavioral rating scale can be very useful. The therapy team identifies the key areas interfering with the survivor's progress and those items are assessed on an hourly basis. At the end of each session, the treating therapist fills out the rating scale and gives feedback to the survivor, using a scale from 1 to 4, ranging from poor, fair, good to excellent. Common categories are "social

appropriateness,” “ability to focus on presented tasks,” “awareness of social boundaries,” and “promptness.” In this way, survivors can receive regular quantitative feedback on their behavioral gains and can work towards a meaningful reward if they are successful.

Claudia Osborn (1998), a physician who sustained an ABI due to a motor vehicle accident, emphasizes the importance of acceptance in the recovery process. In her chapter entitled, “Not as I wish, but as I am,” she discusses the critical steps of awareness, compensation, and ultimately acceptance “that some things about us cannot be restored.” Once survivors reach some level of peace with the injury, their anger level usually significantly decreases, enabling increased productivity in their daily lives.

Anxiety and Stress Management

Anxiety is very common post-TBI and has been reported at rates as high as 70%, with 29% prevalence across all severity types of TBI. The most common symptoms of anxiety post-TBI are free-floating anxiety, fearfulness, intense worry, social withdrawal, and interpersonal sensitivity. Anxiety and depression have a high comorbidity rate (Moore et al. 2006).

Scicutella (Chapter 6) discusses the four subcategories of anxiety, including panic disorder, obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD), and generalized anxiety disorder. Gray and McNaughton (1996) present a model of a “behavioral inhibition system” in the brain that causes anxiety symptoms. They state that anxiety becomes a chronic problem when its correlating brain areas in the behavioral inhibition system malfunction and become overly sensitive to stimuli. They indicate that OCD arises when the septo-hippocampal system, which checks the environment for aversive or novel stimuli, reacts too frequently, resulting in persistent checking and searching. They explain that people who are vulnerable to anxiety have excessively reactive systems.

Brain injury survivors can experience an overwhelming amount of stress due to role changes and altered functional status. The life-threatening experiences they have undergone can create feelings of vulnerability and weakness. Moore et al. (2006) state that TBI is thought to break down psychological defenses and coping strategies, leaving the individual more vulnerable to previously experienced anxiety conditions.

Survivors experiencing significant anxiety will benefit most from individual sessions that reinforce the use of relaxation strategies and stress management techniques. Many survivors experiencing symptoms of anxiety will not be able to tolerate group counseling and will need more individualized attention. Individuals with PTSD benefit most from expressing and working through their emotions surrounding the injury, describing their memories associated with the trauma (such as being restrained in the hospital following the injury) and learning ways to gain control over their fears and concerns in a supportive, encouraging environment. A combination of strategies such as positive self-talk, breathing, imagery and

relaxation exercises, as well as the use of constructive outlets such as music and physical exercise, can assist survivors in managing stress effectively.

Issues of Self-Concept

It is very common for survivors to report a reduction in self-confidence post-ABI. Most cited reasons include lessened mental acuity, a feeling of “brokenness,” loss of autonomy, and decreased productivity in daily life. Additionally, survivors report reduced control over life decisions, the need to revise goals and expectations, as well as feeling devalued or stigmatized by others.

Survivors often need encouragement to avoid magnifying their errors and being overly critical of their weaknesses during the recovery process. Survivors report that gains in confidence are primarily linked to success in real-life activities and to the support and caring of significant others. Garske and Thomas (1992) found that ratings of self-esteem were most strongly related to satisfaction with family interactions, level of social contact, and positive emotional status.

Vickery et al. (2006) examined the impact of group therapy interventions on self-concept in brain injury survivors. They discussed past research that has shown how ratings of self-concept can improve following social skills training and participation in a physical conditioning exercise program and various recreational activities. Their research explored the effectiveness of a group intervention that focused on self-concept changes following ABI by expanding knowledge of the self and reinforcement of positive self-attributes, based on the concepts of self-complexity and importance differentiation. Self-complexity involves the recognition that there are many different aspects to the self and that a person need not be defined in narrow terms. Importance differentiation is the process of recognizing that certain aspects of the self may be more valuable than others. The authors were interested in seeing if challenging the importance of affected areas of self-concept could be curative. Their research evidenced that group members showed a significant increase in self-concept ratings at the end of the group intervention.

Tomberg et al. (2005) studied coping strategies and social support on quality of life post-TBI and found that individuals with TBI used task-oriented and emotional/social support strategies significantly less than control subjects and avoidance-oriented strategies significantly more than controls. They concluded that enhancing a survivor’s well-being involves improving the quality and amount of the social support network. Anson and Ponsford (2006) found that coping strategies characterized as active, interpersonal and problem-focused are associated with higher self-esteem following TBI.

Counseling sessions to boost self-confidence include training in assertiveness, increasing awareness of strengths, providing praise and positive feedback, and assisting in the process of reintegration to meaningful roles. Pegg et al. (2005) studied the impact of person-centered information on patients’ treatment satisfaction and outcomes post-TBI rehabilitation. They found that survivors with moderate to severe injuries who were given more personalized information about their treatment

exerted greater effort in therapy sessions, made greater improvement in functional independence, and were more satisfied with the treatment. They concluded that moderately to severely impaired survivors can benefit from interventions designed to enhance their sense of control and empowerment over their care.

Reintegration to Meaningful Roles

ABI sequelae present a daunting challenge to survivors who are trying to reestablish their sense of work and personal identity. Discharge planning for all clients needs to involve reintegration to productive activities. Primary discharge options include return to work, school or vocational training, volunteer activities, active retirement, or structured day programming.

If a survivor's recovery allows for a return to a former position, appropriate timing and gradual reintegration are both critical to the success of the reentry. It is best to have a survivor start going back to work on a gradual basis, beginning with one to two days a week, and gradually increasing days and hours based on performance. It is important to coordinate efforts with the survivor's work supervisor, requesting reasonable accommodations as needed, and sharing best ways to facilitate the reintegration process. Supportive work supervisors are sometimes able to offer a survivor a modified position, either temporarily or permanently, to further aid the transition from rehabilitation to work.

Survivors who are high-school students receiving neuro-rehabilitation can benefit when they obtain both their tutoring and therapy sessions at the same location, so that tutors and therapists can coordinate efforts. Educating tutors about the best ways to work around the student's weaknesses and to utilize strengths is very helpful. Survivors returning to high school following an ABI may benefit from a gradual shift from the neuro-rehabilitation program to part-time classes, with resource room as needed.

In working with a survivor returning to college or graduate school, it is best to coordinate efforts with the Office of Disabilities at the university. Reasonable accommodations most commonly recommended include extended time on tests in a private room and permission to tape lectures as well as to use the services of a note taker. Enlarging handouts and tests, as well as providing tests in multiple choice format, can be helpful for certain clients.

Volunteering is an excellent next step for many survivors who are not returning to school, work or homemaking responsibilities following rehabilitation. Within many hospital settings, there are many structured opportunities ranging from filing and basic clerical work to maintenance, paper delivery, food preparation, mail room responsibilities and gift shop work, to higher level positions, such as reading to children in pediatric wards or acting as a patient advocate. The clinical team and the coordinator of volunteer services can try to match a position to a survivor's abilities and interests.

For survivors who are unable to return to pre-injury work but are good candidates for reentry to competitive employment, coordination of efforts with a state or

privately funded vocational program can sometimes lead survivors to appropriate career changes. For instance, survivors who cannot return to the physical work of construction may become trained in construction management or computer programming, or a survivor who was an Emergency Medical Technician (EMT) can be retrained as a lab technician.

Post-ABI Growth

CD was a 33-year-old electrician receiving neuro-rehabilitation subsequent to a cocaine-induced brain aneurysm. During the initial meeting, CD was agitated and devoid of insight, stating that he only used cocaine and alcohol infrequently “at weddings.” He was in denial regarding his drug and alcohol problem and was totally unaware of neuro-cognitive changes following his injury. CD’s only focus was on discharge and returning to his former life. Once a positive therapeutic alliance was gradually developed and insight grew, CD became more willing to explore and reevaluate his pre-injury life. He was able to see that his daily “partying” had hurt his self-esteem, career opportunities, financial status, interpersonal relationships, and finally his health and thinking abilities. The client had difficulties with attention, short-term memory, and processing speed, but was able to master compensatory strategies to work around his difficulties effectively.

CD spoke about the positive changes he wanted to institute in his life and the fact that his injury led him to personal growth. He ultimately used his injury and subsequent neuro-rehabilitation experience for the purpose of post-ABI growth. He began his own business, started a family, worked around his difficulties by consistent use of strategies, and stayed away from substances.

The concept of post-ABI growth developed as a result of working with hundreds of survivors like CD who demonstrated constructive life changes following an ABI. Post-ABI growth refers to any positive byproduct resulting from an ABI, such as an improvement in sense of self, an increase in appreciation of friends and family, a termination of destructive habits or introduction to new vocational or avocational pathways.

Substance Abuse Challenges

Coping with both ABI and substance abuse challenges result in “a multidimensional disability and presents a unique set of problems related to dual diagnosis.” Alcohol is involved in the acquisition of 35–66 % of all TBIs (Dell Orto & Power, 2000). Once an individual has sustained an ABI, continued alcohol abuse is linked to increased likelihood of seizures, poor impulse control, and heightened cognitive deficits.

Some individuals may be predisposed to sustaining a TBI due to self-destructive behaviors as a result of depression or substance abuse. The higher the number of pre-injury vulnerabilities (such as a history of depression or substance abuse, lack of family support, or limited education), the more challenging the recovery process with a more guarded prognosis. Individuals with complex histories will require

the collaboration of specialists in neuropsychiatry and substance abuse treatment to increase the likelihood of a favorable recovery.

Screening for alcohol and substance abuse during a survivor's initial intake to a neuro-rehabilitation program is critical. Findings suggest that CAGE (Cut down, Annoy, Guilty and Eye Opener) may be a useful screening tool for alcohol abuse and that the Substance Abuse Subtle Screening Inventory (SASSI-3) may be useful for assessing drug abuse in individuals with TBI (Ashman et al., 2004). CAGE is a four question-screening tool that addresses the drinking experience of the individual. Two or more positive responses are viewed as an indication of an alcohol problem (Ewing, 1984). Following screening, case management appears to have a beneficial effect on survivors with both TBI and substance abuse challenges (Heinemann et al., 2004).

Conclusion

The experience of counseling individuals post-ABI is always dynamic and demanding. The beginning challenges involve creating a favorable rapport, developing trust, establishing an environment where the survivor feels comfortable sharing personal issues, and assisting in empowerment of the individual in the process of recovery. Later challenges may involve effecting confrontation without alienation, keeping a goal-oriented approach, weaving significant others actively into the process, reinforcing strategies to improve mood and frustration tolerance, as well as ensuring that the survivor is on a productive path emotionally and socially. The final objectives are to keep the individual hopeful about the future despite awareness of residual weaknesses and to assist in the process of transitioning successfully to a next step that involves continued structure and stimulation, such as work, school or a volunteer role.

The counselor/psychotherapist is oftentimes the survivor's primary partner in the neuro-rehabilitation process, due to the clinician's awareness of the individual's fears, motivations, vulnerabilities, and triggers. It is highly important to integrate efforts with all other team members to assure that emotional and behavioral difficulties are not interfering with the survivor's progress in any domain. This type of close team communication and collaboration enables the survivor to receive consistent feedback from different team members and also highlights the fact that the team is working in concert, guiding the survivor towards goal achievement and reintegration to meaningful roles.

References

- Alderfer, B., Arciniegas, D., Silver, J. (2005) Treatment of depression following traumatic brain injury. *The Journal of Head Trauma Rehabilitation* 20(6):544–562.
- Anson, K., Ponsford, J. (2006) Evaluation of a coping skills group following traumatic brain injury. *Brain Injury* 20(2):167–178.

- Ashman, T.A., Schwartz, M.E., Cantor, J.B., Hibbard, M.R., Gordon, W.A. (2004) Screening for substance abuse in individuals with traumatic brain injury. *Brain Injury* 18(2):191–202.
- Baguley, I.J., Cooper, J., Felmingham, K. (2006) Aggressive behavior following traumatic brain injury. *Journal of Head Trauma Rehabilitation* 21(1):45–56.
- Beck, J.S. (1995) *Cognitive Therapy: Basics and Beyond*. New York: Guilford Press.
- Blais, M., Boisvert, J. (2005) Psychological and marital adjustment in couples following a traumatic brain injury: A critical review. *Brain Injury* 19(14):1223–1235.
- Cantor, J.B., Ashman, T.A., Schwartz, M.E., Gordon, W.A., Hibbard, M.R., Brown, M., Spielman, L., Charatz, H.J., Cheng, Z. (2005) The role of self-discrepancy theory in understanding post-traumatic brain injury affective disorders. *Journal of Head Trauma Rehabilitation* 20(6):527–543.
- Cicerone, K.D. (1989) Psychotherapy interventions with traumatic brain injury patients. *Rehabilitation Psychology* 34:105–114.
- Cicerone, K.D., Dahlberg, C., Malec, J.F., Langenbahn, D.M., Felicetti, T., Kniepp, S., Ellmo, W., Kalmar, K., Giacino, J.T., Harley, J.P., Laatsch, L., Morse, P.A., Catanese, J. (2005) Evidence-based cognitive rehabilitation: Updated review of the literature from 1998 through 2002. *Archives of Physical Medicine and Rehabilitation* 86:1681–1691.
- Crosson, B., Barco, P.P., Velozo, C.A., Bolesta, M.M., Cooper, P.V., Werts, D., Brobeck, T.C. (1989) Awareness and compensation in post-acute head injury rehabilitation. *Journal of Head Trauma Rehabilitation* 4(3):46–54.
- Dell Orto, A.E., Power, P.W. (2000) *Brain Injury and the Family*. New York: CRC Press.
- Dikman, S.S., Bombardier, C.H., Machamer, J.E., Fann, J.R., Temkin, N.R. (2004) Natural history of depression in traumatic brain injury. *Archives of Physical Medicine and Rehabilitation* 85:1457–1464.
- Engberg, A.W., Teasdale, T.W. (2004) Psychosocial outcome following traumatic brain injury in adults: A long-term population-based follow-up. *Brain Injury* 18(6):533–545.
- Evans, C., Sherer, M., Nick, T., Nakase-Richardson, R., Yablon, S. (2005) Early impaired self-awareness, depression, and subjective well-being following traumatic brain injury. *Journal of Head Trauma Rehabilitation* 20(6):488–500.
- Ewing, J.A. (1984) Detecting alcoholism: The CAGE questionnaire. *Journal of the American Medical Association* (252):1905–1907.
- Garske, G.G., Thomas, K.R. (1992) Self-reported self-esteem and depression: Indexes of psychosocial adjustment following severe traumatic brain injury. *Rehabilitation Counseling Bulletin* 36:44–52.
- Giles, G.M., Manchester, D. (2006) Two approaches to behavior disorders after traumatic brain injury. *Journal of Head Trauma Rehabilitation* 21(2):168–178.
- Gordon, W., Hibbard, M.R. (2005) Cognitive rehabilitation. In Silver, M., McAllister, T., Yudofsky, S. (eds.): *Textbook of Traumatic Brain Injury*. Virginia: American Psychiatric Publishing, Inc, pp. 655–660.
- Gray, J.A., McNaughton, N. (1996) *The Neuropsychology of Anxiety*. Nebraska: University of Nebraska Press.
- Hart, T., Sherer, M. (2005) Disorders of self-awareness. *The Journal of Head Trauma Rehabilitation* 20(4):287–367.
- Heinemann, A.W., Corrigan, J.D., Moore, D. (2004) Case management for traumatic brain injury survivors with alcohol problems. *Rehabilitation Psychology* 49(2):156–166.

- Hibbard, M.R., Grober, S.E., Gordan, W.A., Aletta, E.G., Freeman, A. (1990) Cognitive therapy and the treatment of post-stroke depression. *Topics in Geriatric Rehabilitation* 5:43–55.
- Jorge, R.E., Starkstein, S.E. (2005) Pathophysiologic aspects of major depression following traumatic brain injury. *The Journal of Head Trauma Rehabilitation* 20(6):475–486.
- Kortte, K.B., Wegener, S.T., Chwalisz, K. (2003) Anosognosia and denial: Their relationship to coping and depression in acquired brain injury. *Rehabilitation Psychology* 48(3):131–136.
- Mateer, C.A., Sira, C.S., O'Connell, M.E. (2005) Putting humpty dumpty back together again: The importance of integrating cognitive and emotional interventions. *Journal of Head Trauma Rehabilitation* 20(1):62–75.
- Medd, J., Tate, R.L. (2000) Evaluation of an anger management therapy program following acquired brain injury: A preliminary study. *Neuropsychological Rehabilitation* 10(2):185–201.
- Moore, E.L., Terryberry-Spohr, L., Hope, D.A. (2006) Mild traumatic brain injury and anxiety sequelae: A review of the literature. *Brain Injury* 20(2):117–132.
- Oppermann, J.D. (2004) Interpreting the meaning individuals ascribe to returning to work after traumatic brain injury: A qualitative approach. *Brain Injury* 18(9):941–955.
- Osborn, C.L. (1998) *Over My Head*. Kansas City: Andrews McMeel Publishing.
- Pegg, P.O., Auerbach, S.M., Seel, R.T., Buenaver, L.F., Kiesler, D.J., Plybon, L.E. (2005) The impact of patient-centered information on patients' treatment satisfaction and outcomes in traumatic brain injury rehabilitation. *Rehabilitation Psychology* 50(4):366–374.
- Pepping, M., Roueche, J.R. (1990) Psychosocial consequences of significant brain injury. In Tupper, D.E., Cicerone, K.D. (eds.): *The Neuropsychology of Everyday Life Issues in Development and Rehabilitation*. Boston: Kluwer Academic.
- Prigatano, G.P. (1999) *Principles of Neuropsychological Rehabilitation*. New York: Oxford University Press.
- Prigatano, G.P., Schacter, D.L. (eds.). (1991) *Awareness of Deficits After Brain Injury*. New York: Oxford University Press.
- Rath, J.R., Hennessy, J.J., Diller, L. (2003) Social problem solving and community integration in postacute rehabilitation outpatients with traumatic brain injury. *Rehabilitation Psychology* 48(3):137–144.
- Sherer, M. (2005) Rehabilitation of impaired awareness. In High, W.M., Sander, A.M., Struchen, M.A., Hart, K.A. (eds.): *Rehabilitation for Traumatic Brain Injury*. New York: Oxford University Press, pp. 31–46.
- Sohlberg, M.M., Mateer, C.A., Penkman, L., Glang, A., Todis, B. (1998) Awareness intervention: Who needs it? *Journal of Head Trauma Rehabilitation* 13(5):62–78.
- Stuss, D.T., Benson, D.F. (1986) *The Frontal Lobes*. New York: Raven Press.
- Tiersky, L.A., Anselmi, V., Johnston, M.V., Kurtyka, J., Roosen, E., Schwartz, T., DeLuca, J. (2005) A trial of neuropsychologic rehabilitation in mild-spectrum traumatic brain injury. *Archives of Physical Medicine and Rehabilitation* 86:1565–1574.
- Tomberg, T., Toomela, A., Pulver, A., Tikk, A. (2005) Coping strategies, social support, life orientation and health related quality of life following traumatic brain injury. *Brain Injury* 19(14):1181–1190.
- Van de Meent, H., Geurts, A.C.H., Limbeck J.V. (2003) Pharmacologic treatment of post-stroke depression: A systematic review of the literature. *Topics in Stroke Rehabilitation* 10(1):79–92.

- Vickery, C.D., Gontkovsky, S.T., Wallace, J.J., Caroselli, J.S. (2006) Group psychotherapy focusing on self-concept change following acquired brain injury: A pilot investigation. *Rehabilitation Psychology* 51(1):30–35.
- Wood, R.L., Liossi, C., Wood, L. (2005) The impact of head injury neurobehavioral sequelae on personal relationships: Preliminary findings. *Brain Injury* 19(10):845–851.
- Youngjohn, J.F., Altman, I.M. (1989) A performance-based group approach to the treatment of anosognosia and denial. *Rehabilitation Psychology* 34:217–222.