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ABSTRACT

This document provides a resource and problem-solving guide for vocational rehabilitation counselors serving people with brain injuries acquired through trauma or other circumstances. An introduction defines acquired brain injury, characterizes the uniqueness of people with acquired brain injury, and describes community resources. Chapter 2, "Assessment and Evaluation," discusses referral for vocational rehabilitation services, sources of information, and vocational testing. Chapter 3, "Planning," outlines information needs, consumer involvement, family issues, and agreement on rehabilitation goals. Chapter 4, "Service Delivery," focuses on identifying and selecting appropriate services and programs and evaluating service providers. Chapter 5, "Achieving Employment Outcomes," examines general placement considerations (consumer, job site, employer, and support system); placement options; vocational supports; job retention; employer training; and case closure. The final chapter, "Administrative Issues," addresses administrative commitment, the role of the state agency's acquired brain injury coordinator and specialty counselors, case management issues, resource development, staff training, and interagency coordination. An appendix titled "Understanding Neuropsychological Factors Related to Work Performance" concludes the document. (Contains approximately 175 references.) (JDD)

TWENTIETH INSTITUTE ON REHABILITATION ISSUES

EMPLOYMENT OUTCOMES FOR PERSONS WITH ACQUIRED BRAIN INJURY

RESEARCH AND TRAINING CENTER

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Report from the Study Group on

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Acknowledgements

Persons associated with vocational rehabilitation are probably wondering why do we need another book about employment services for people with brain injuries. For the past several years there have been a number of conferences, white papers, manuals, and books about people with brain injuries and their access to community-based services. In fact the Institute on Rehabilitation Issues (IRI) studied this topic in 1985, and I had the pleasure of updating that work just three years ago in 1990.

A year ago the suggested title for this book was "Increasing Employment Outcomes for Persons with Traumatic Brain Injury." The Prime Study Group (the writers) were asked to:

1. Identify the range of employment issues for people with traumatic brain injury and for the rehabilitation counselors serving them.
2. Identify strategies to increase positive employment outcomes for people with traumatic brain injury and for increasing career options including return to former career.
3. Identify local and national resources.
4. Identify the role of family in supporting return to work.

As in all Institute on Rehabilitation Issues the title and issues were a point of departure not a mandate. It was felt by the IRI Executive Committee that there was enough new data and that these issues were different enough that a new study was warranted.

One of the problems with many texts about employment of persons with brain injury is they often present things as they are in an ideal world--one where research dollars allow for small caseloads and access to every imaginable specialist. The difference with this text is that it has a very focused audience--the vocational rehabilitation counselor. Many of the persons who participated in the writing of this text are either vocational rehabilitation counselors, persons who work with and provide consultation to vocational rehabilitation counselors, or those individuals who have trained vocational rehabilitation counselors. In writing this text, the group had many lively discussions over certain topics or issues. However, the group always returned to "What would a vocational rehabilitation counselor do and what resources would she or he have available to address this issue?"

The group attempted to develop this text to highlight the relationship between the vocational rehabilitation counselor and the consumer. The group felt that the interaction between these two was critical to a successful employment outcome.

The first major issue the authors grappled with was whom were they talking about. The majority eloquently supported the notion that traumatic brain injury (TBI) was too narrow--it excluded too many people with brain injury. After discussion it was decided that the book should discuss the needs of persons with **Acquired Brain Injury (ABI).** The difference between the two is that "acquired" connotes the brain injury may have occurred from causes other than trauma.

Next, the group decided that rather than limit individuals by diagnosis, they would attempt to describe functional capacities and limitations. Function describes people by what they can do while diagnosis usually highlights loss or deficiencies. The vocational rehabilitation counselor is always concerned about functional capacities on which to help consumers build their vocational future.

The purpose of writing this text is to provide a resource and problem-solving guide for front-line vocational rehabilitation counselors. The group has attempted to take into account known best practices that existed in 1993. Also included are limitations that may affect the manner and intensity with which a vocational rehabilitation counselor provides services to persons with brain injury. It is recognized that there are funding limitations, negative family dynamics, bureaucratic red tape, and a variety of other factors that may interfere with how vocational rehabilitation counselors serve consumers. The group also recognizes the limitations of our current technology. It is understood that many vocational rehabilitation counselors work in rural areas where services are not available and consequently must assume a majority of the service-provider roles themselves. The group pooled their combined expertise to address these issues.

Finally, the group felt they have an advocacy role. They strongly urge state consumer organizations and agency administrative personnel to develop in-service and preservice training programs for counselors. In addition, funding for specialists in rehabilitation of persons with acquired brain injury is urged.

The reader will acknowledge that the Prime Study Group met the issues presented head on. They have developed a book that is valuable to service delivery to persons with acquired brain injuries. The work of the Prime Study Group was edited by Augusta Cash, State Head Injury Coordinator and Betty Sarvis, Senior Vocational Rehabilitation Counselor. They, too, assured that the material presented addressed the needs of practicing rehabilitation counselors.

It has been a distinct honor, privilege, and pleasure to work with this Prime Study Group. They were all hard working and accepted the challenge presented. They were also a diverse group in age, training, and experience in vocational rehabilitation. Their varying perspectives made for an excellent book but for difficulty in editing. I had the final say in editing where the overriding issue was understanding of the points made. Therefore I want to apologize in advance for the omission of any member's ideas from the final edition.

David W. Corthell, Ed.D.
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Chapter I

INTRODUCTION

As a result of improved medical care, many people with traumatic brain injury (TBI) have survived during the past twenty-five years. Advocates and public policy have clearly indicated a need for providing rehabilitation services for persons with acquired brain injuries. As a result, vocational rehabilitation counselors have seen their caseload of persons with brain injury increase dramatically.

Over the past ten years, some vocational rehabilitation counselors have acquired knowledge, training, and understanding of traumatic brain injury. Vocational rehabilitation counselors who have worked with persons with traumatic brain injury have also discovered people with brain injury received from causes other than trauma, head-injured individuals who have been misdiagnosed, and individuals with head injuries who received inappropriate services or no services.

The major purpose for writing this text is to provide a resource and problem-solving guide for front-line vocational rehabilitation counselors. The authors pooled their combined expertise and provided as much guidance and information as possible to assist counselors in serving people with brain injuries. They attempted to describe practices existing in 1993 that have achieved success. Included are limitations that may affect the manner and intensity with which a vocational rehabilitation counselor provides services to persons with brain injury. It was recognized that there may be funding limitations, negative family dynamics, bureaucratic red tape, and a variety of other factors that may interfere with how vocational rehabilitation counselors serve consumers. It is also understood that counselors work in diverse settings where services may not be available or adequate. However, even with these circumstances, vocational rehabilitation counselors have successfully served person with head injuries.

DEFINITION

People use the terms head injury, brain injury, head trauma, and traumatic brain injury (TBI) interchangeably. Upon further inquiry, people frequently mean traumatic brain injury or closed-head injury as defined in the publication from the Twelfth Institute on Rehabilitation Issues:

> Traumatic brain injury, as dealt with in this publication, is defined as brain damage from a blow or other externally inflicted trauma to the head that results in significant impairment to the individual's physical, psychosocial, and/or cognitive functional abilities. It is characterized by altered consciousness (coma and/or post-traumatic amnesia) during the acute phase after injury, the duration of which varies greatly between individuals and with the severity of the injury. (Corthell & Tooman, 1985, p. 3)

A similar definition appeared in the 1990 revision of the Institute publication (Spivack & Balicki, 1990). Both definitions focus only on trauma as a cause of head injury. This is in part due to the fact that the most dramatic increase in head injury has been from trauma. In addition, the number of persons with TBI consists largely of males between the ages of 15 and 34 who were most likely involved in a motor vehicle accident. Further, "due to improved survival rates after severe head injury since the late 1970s, there may be as many as 1,500,000 Americans under age 45 with significant disabilities which interfere with their ability to reenter their communities independently" (Spivack & Balicki, 1990, p. 16).

Spirited discussion within the group participating in the 1993 Institute on Rehabilitation Issues revolved around the value of keeping or expanding this definition. Traumatic brain injury suits a researcher's purpose well as it defines a relatively homogeneous population. However, services within the rehabilitation community require a broader and more inclusive definition. Since this publication is aimed primarily at service providers and more specifically vocational rehabilitation counselors, an expanded definition is required.

There are several sources of injury to brain cells in addition to trauma or external physical force. Among the other sources of injury are congenital or developmental disorders, birth trauma, malignancy, degenerative process, heart attack, stroke, anoxia, toxic substance in the blood, and infection (bacteria, virus).

Rehabilitation counselors are familiar with many of the congenital or early onset disorders and probably do not even think of individuals with developmental disabilities as brain injured. Fetal alcohol syndrome and congenital cocaine addiction are newly designated causes of brain injury. As adults, individuals with these diagnoses may need vocational rehabilitation services along with other services.

At the other end of the age range, the incidence of older adult onset brain injury will undoubtedly increase. Medical advances have also occurred in management of these non-traumatic brain injuries. The increase in the number of older adults also means more people will survive nontraumatic brain injuries such as stroke and tumors.

Keeping all of these considerations in mind, the authors excluded from the current definition of congenital or early brain injuries and included only adult onset causes. It was felt that persons with early onset brain injuries are significantly different from persons with sudden onset in their teens or when adults.

In this book the definition of acquired brain injury is:

A change, often sudden, in functional ability as a result of insult to the brain.

The term "functional" appears frequently in this publication and refers to what a person can do right now in the real world and what a person has difficulty doing. Asking both what a person can and what a person cannot do is essential. Counselors and people with brain injury must know about the person's functional deficits or limitations and determine what can be improved or accommodated. The person's functional capacities tell us what the strengths are

on which to build. For example, a person may use tools well, like to fix bicycles, have a right visual field loss, and become agitated and restless in noisy or crowded environments. This practical information about functioning becomes critical to selecting work environment and type of work and setting up a work station.

THE UNIQUENESS OF PEOPLE WITH ACQUIRED BRAIN INJURY

The functional capacities and limitations of a person with acquired brain injury are different from person to person and can be very different over time for the same person. The reports counselors receive are a "snapshot" of functioning. The counselors may find a different picture next month or next year. They may also receive different snapshots of the same person's function in the office, the mall, a structured work evaluation, or the person's home. Because of the changing picture, counselors must be flexible, and services often must be long-term and/or ongoing. Counselors must also maintain a delicate balance when juggling hope for improvement with the reality of permanent loss and the humility to understand and accept the imponderables of such challenges.

COMMUNITY RESOURCES

Counselors need knowledge of resources that will assist people with brain injuries. People with acquired brain injuries will often require multiple services from several agencies and groups in order to function effectively. Unlike persons with other disabilities, persons with acquired brain injury will find that multiple areas of functioning are commonly affected. An individual may have balance difficulties, emotional lability, visual field problems, trouble remembering, and/or lack social awareness.

It is understood there are local variations in the availability of the following resources and how they are used. The information is presented here to stimulate interest in and advocacy for these resources.

Social Security. The Social Security Administration has incentive programs to help people return to work. The Plan for Achieving Self Support (PASS) is a possible source of funding for extended employment services, for case management, and for other services that could be paid for in the context of a plan to become independent of Social Security. Those persons interested in writing PASS plans should obtain a copy of the Red Book from the Social Security Administration. It will provide the reader with examples of how to prepare PASS plans. However, plans are approved only for persons working or who have another source of income.

Circles of Support and Person-Centered Teams. Mount and Zernik (1989) describe Circles of Support and Person-Centered Teams, two support networks for persons with brain injury. Circles of Support are made up of family members, friends, neighbors, or other people who care. The Circle can also include paid human service workers who spend a lot of time with the focus person. The focus person and his or her existing relationships are the basis for this

type of community support. A network is developed around the focus person to help provide ongoing assistance to the individual who is interacting with work situations and the community at large.

The primary focus of Circles of Support is on the needs of the individual with the brain injury. The focus person develops a futuristic vision of his/her self and receives assistance from the Circle in gaining that vision. Assisting the focus person to develop a vision does not mean formulating that vision according to the desires of the Circle members. It means formulating a vision according to the needs and desires of the focus person. There is no right or wrong to the focus person's vision of what he or she wants to accomplish. The Circle is there to help accurately describe ways of making the vision a reality. At the same time, the Circle can realistically describe barriers to the vision and possible solutions to those barriers.

Eventually, the Circle of Support expands outward to the community at large. Friends, relatives, and other interested individuals can assist the focus person in developing community connections. This may be done through clubs, churches, and places of employment.

The Person-Centered Team is a support network of service workers for those individuals who have become the most segregated from full community participation. These may be individuals who live in group homes, who work in sheltered workshops or activity centers, and whose recreational activities are generally limited to watching television and group outings. Over time, an individual with a severe brain injury may withdraw from social participation in the community. The focus person in this case has little or no contact with family members, nondisabled friends, or other community members.

A small group of human service workers who have interaction with the focus person on a day-to-day basis meet regularly with the focus person to discuss his or her individual goals. The group helps the focus person to decide upon various strategies in meeting current and future needs. The group identifies and works with other people in the focus person's life. Family members, if available, and line staff who have not been involved may be called upon for input and information. These individuals may then be more willing to become involved with the focus person. As in the Circle of Support, the Person-Centered Team works toward establishing and building relationships for the focus person. Community inclusion is always the primary goal of the Person-Centered Teams.

Vocational rehabilitation counselors may purchase the expertise of a provider in establishing these support networks. The counselor may also act as a back-up to help problem solve or trouble shoot when necessary. This approach to service is effective in meeting the needs of the focus person. Intervention is kept to a minimum while still being intense when and if necessary. This model can work across a number of domains, from residential to employment, from recreation to finance. Once the Circle has been trained and established, this support system should be very cost effective, since the friends are just that--friends--and not paid counselors or caregivers. The monitoring process for the vocational rehabilitation counselor should be focused on the ability of the network to increase the functional capacity of the individual. Once the individual's support system is operating on it's own the vocational rehabilitation counselor could close the case, for successfully employed consumers. At a later

date, the counselor could provide post-employment services should further support be necessary.

Clubhouse. The Clubhouse model is based on Fountain House (Beard, Propst, & Malamud, 1978), a community-based program that was originally developed for persons with psychiatric disabilities and that has recently been adapted for persons with acquired brain injury. Fountain House is based on principles of peer support, consumer direction, and individual needs. The program recognizes that the impairments faced by individual members do not define personal abilities, interest, and goals. Instead, impairments are specific problems that interfere with each person's opportunity to live self-sufficiently and productively. The model also recognizes that each person, regardless of handicaps, has contributing skills and abilities that makes him or her an important and active individual in the community. By focusing on abilities over disabilities, the project provides the most normalized and inconspicuous support that each member needs to improve his or her quality of life.

There are no patients or even clients in Fountain House, only members with a limited number of staff to support Clubhouse (program) operation and specialized member needs. Members live in diverse community settings and meet daily at the Clubhouse. Here, they take responsibility for most aspects of program operation including answering telephones, clerical work, maintaining the premises, daily finances, running support groups, operating the cafeteria, special projects, and so on, according to their interests and abilities. These are real work activities to keep the program operating, not make work.

Maintaining Clubhouse operation is not the therapeutic goal for Fountain House members. The roles and functions provided within this setting, however, provide the values in daily life and opportunities for vocational development. Those members who show interests and abilities beyond the Clubhouse milieu pursue community placements in volunteer situations, sheltered employment, transitional employment, supported employment, community jobs, and school settings. Those who may never be capable of independent community or vocational life remain at the Clubhouse where they are accepted within its social milieu for their capable contributions; in this manner they become productive and accepted members of society.

The Clubhouse format offers a number of features that make it a viable program for persons with acquired brain injury. Theses features include its (a) emphasis on individual values and abilities, instead of disabilities; (b) respect for each member as a functional adult; (c) community orientation; (d) peer support milieu; (e) nonmedical and noninstitutional setting; (f) ability to meet the varying needs of individuals; and (g) emphasis on return to work and productive engagement within the individual's ability.

Life Coach. The concept of Life Coach is an outgrowth of the job coach concept developed as part of the supported employment initiative. The Life Coach model provides the type of support, structure, assistance, and advice some people need in order to function effectively in a variety of settings including, home, school, work, and recreation and as a consumer. The typical Life Coach is a generalist, trained and directed by a professional, who will work with the focus person in a number of functional life areas. The Life Coach approach, by design, starts with an assessment of the focus person's functional abilities in a number of environments. Based on this assessment, a plan is developed to assist the individual to perform

each function with the least amount of assistance, prompting, and/or help necessary. The Life Coach may start with training independent living skills. However, he\she also works to improve functional skills of the individual in educational, recreational, or employment settings.

Like the supported employment job coach, the Life Coach works to reduce the amount of time and number of interventions needed for the individual to complete a task. From the start, the Life Coach model uses naturally occurring supports as much as possible to achieve its goal. If at all possible, a person in the area where the task occurs (family, supervisor, friend) is taught how to provide the intervention. Regardless of who provides the intervention, once the task is learned the fading process is begun. Throughout the fading process of Life Coach activity, the individual is given more and more control of his/her life. If the individual still needs assistance when it is determined that no further fading is possible, every effort is made to transfer the assistance to more naturally occurring supports in the community (if not done earlier). In this way, the responsibilities of the Life Coach are transferred to family, friends, co-workers, supervisors, or others. This type of program allows a great amount of flexibility in the functional areas addressed. In addition, this model can cover a wide variety of settings. The Life Coach model also provides a consistent approach, since the same coach works with the individual across all domains. The coach usually has access to outside consultation from their supervisor (senior Life Coach) or program director. The approach allows a provider more flexibility and the ability to cover a wide geographic area. This is usually true because most Life Coaches work as sub-contractors to the provider or provider group.

Several areas of concern need to be dealt with by the counselor. First, a complete assessment is the basis for service. Secondly, monitoring of progress is a regularly occurring event. Since the service can cover a number of areas, the counselor needs to insure that the goals and objectives are the consumer's and not those of the program or Life Coach.

Finally, because this approach is very dependent on the Life Coach, the consumer/coach match is critical. The consumer and coach must get along since they will be spending a lot of time together. Coaches need experience, training, flexibility, and an understanding of brain injury in order to succeed. Often, though, the reality is that the coach has received training on the job, rather than a formal more structured approach. As with most human service programs, the results are only as good as the people providing the service. Even though programs try very hard for consistency, the consumer/coach match is most critical.

Independent Living Centers. An Independent Living Center is a valuable resource for counselors and a continuing source of support for consumers. The Research and Training Center on Independent Living (undated manuscript) describes independent living:

> Essentially, it is living just like everyone else--having opportunities to make decisions that affect one's life, able to pursue activities of one's own choosing--limited only in the same ways that one's nondisabled neighbors are limited. Independent living should not be defined in terms of living on one's own, being employed in a job fitting one's capabilities and interests, or having an active social life. These are aspects of living independently. Independent living has to do with self-determination. It is having the right and the opportunity to pursue

a course of action. And, it is having the fre[illegible]to fail--and to learn from one's failures, just as non disabled people do.

Independent Living Centers are run by people with disabilities and vary in the services they provide. Four services are considered essential by independent living centers. These services necessary for people with disabilities to live independently are:

1. Information and referral
2. Independent living skills training
3. Peer counseling
4. Advocacy

Historically Centers for Independent Living (CILs) have not been very successful in serving persons with brain injuries. Originally, CILs primarily served persons with physical disabilities. However, the more progressive ones now provide services to persons with a broader range of disabilities including persons with acquired brain injury.

Head Injury Associations. The National Head Injury Association and local chapters provide information, referral, advocacy, and other services. The groups can be a linkage between consumers and professional organizations and services. Different states and different areas within a state may have varying levels of expertise, accessibility, and support. In addition, some states do not have a Head Injury Association. Consequently, the counselor must be aware of the services available in his/her local area. Malec and Thomas (1993) describe a program operated by the Minnesota Head Injury Association (MHIA) and designed to serve especially underserved rural areas in Minnesota.

> With the help of federal funding, MHIA has developed a system of regional networks that includes brain injury advisory committees and an MHIA representative ("community coordinators") in each of several rural regions throughout the state. The community coordinators serve as liaisons between consumers and professionals both within the region and throughout the state. Besides linking consumers with professionals, the community coordinators assist persons with traumatic brain injury in finding a supportive friend or family member to work with them towards community re-integration in the Heads Together program. With the advisory committees, community coordinators also play an important advocacy role both locally and statewide. (p. 94)

The primary purpose of the National Head Injury Foundation (NHIF) is advocacy. However, they provide other services and information about how to contact a head injury association in a specific area (call 1-800-444-NHIF).

Communities may also have many other resources that are useful supports. For example, the county or city transit system may provide volunteers to teach new bus routes or assist as

necessary with transportation. Bank personnel are often helpful in money handling. An individual may learn to coordinate and manage his or her own life. He/she may have specific people who help in specific areas (health information, money management, relationships, etc) as everyone does. The essence of independent living and community reintegration is, in any case, relationships and connections with people.

Chapter II

ASSESSMENT AND EVALUATION

It is important to keep several factors in mind when planning a strategy for vocational assessment of persons with acquired brain injury. First, it is crucial that the strategy remains flexible regarding the type of assessment being planned; the length of time required to carry out the process; and any testing, work sampling, situational assessment, or job trials that may be needed. Assessments must also be functionally based and solidly seated in the demands expected in the work world and in social situations typically encountered. Finally, assessments must be ongoing, as opposed to time limited.

These strategies are necessary prerequisites since improvements in functional skills, adaptations in the work environment, or acquisitions of compensatory strategies are likely to occur continually. A static evaluation is valid only as a baseline measure of where the person functioned at a specific point in time and under certain limited conditions. Traditional neuropsychological and vocational evaluations are by no means any less valuable in rehabilitation planning. However, the counselor must relate this information to what is needed in order to begin to provide employment related services.

This chapter[1] will review an assessment philosophy based upon these primary assumptions. It will also suggest specific approaches and considerations for use when working with persons who have an acquired brain injury.

PRELIMINARY CONSIDERATIONS

Assessment results must translate into reports the consumer and rehabilitation specialist understand and can use for planning. For example, an assessment may suggest a person performs poorly on tests of conceptual reasoning and perceptual organization. This information is of no value to a counselor or consumer unless they can translate these constructs into functional and understandable terms. Abstract concepts convey little in the way of useful information in terms of vocational planning unless the report follows such statements with functional skills or abilities. A different tactic is taken if the evaluation is done in the context of comparing a person's skills and abilities against primary duties of a targeted job. In this case, the person's performance against industrial norms is useful.

The evaluator may define worker traits, present detailed percentile rankings, or list areas

[1]Some of the material incorporated into this chapter was taken from a chapter by Thomas (1990) in Corthell's (1990 **Traumatic Brain Injury and Vocational Rehabilitation** and modified to fit present needs. Readers interested in further information can consult that document for additional details.

of relative deficit either in a report or through personal feedback. If so, the counselor must work with the evaluator to develop a functional report. A useful report will note what a person can do in a functional sense, what limitations are present that will keep him/her from functioning independently, and what can be done to improve the individual's functioning. For example, a person who cannot perform basic math skills may perform this task adequately with a pocket calculator. A person with poor visual spatial skills may perform well on a job that does not require these skills. Compensatory strategies will not eliminate a problem but may make the problem manageable. For example, the use of a written check list to compensate for a cognitive deficit is much the same as using glasses to compensate for imperfect sight.

Assessment is an ongoing process for any individual in a stage of improvement or for persons with permanent limitations whose job duties or type of work is likely to change. Individuals are often encouraged to enter employment related programs for assessment or job training when they are continuing to improve in cognitive, physical, and psychosocial skills. When this happens, it is reasonable to expect that changes will occur throughout the rehabilitation process and beyond. Wehman (1990) defined assessment of behavior at a point in time as "a snapshot evaluation." As new compensatory skills or improved rehabilitation technology is applied, it is likely that a person's day-to-day functioning will improve. In addition, changes in home, work, and/or community environments or job expectations can affect functioning. Therefore, assessment needs to remain dynamic and continual, and must change as new needs arise.

Flexibility in assessment is necessary if improvements in functional skills are to occur. Flexibility is also needed as adaptation and compensatory strategies are developed and used in the planning and conducting of the vocational assessment.

A hypothesis testing approach as suggested by Glisky (1993) and Thomas (1990c) seems to work well. For example, a reported problem at home and at the job may suggest a functional impairment. One may develop a hypothesis that due to allegedly poor executive functioning, a person may need structure, assistance with decision making, and assistance in planning work tasks. This hypothesis may be supported by results of neuropsychological testing. However, care is necessary if the hypothesis that poor results on tests of executive functions automatically translates to poor work functioning. Counselors often find that a person functions better on a job than the neuropsychological report predicts. This observation is especially true if the tasks were routine for the person prior to the injury. Flexible planning, on the basis of functional skills observed in the work world is thereby an essential ingredient in rehabilitation planning.

As Figure II-1 (Corthell & Griswold, 1987) illustrates, vocational evaluation is an initial step in the screening process used to determine employment related service needs. As such, it may be conceptualized as a time limited component in the service delivery process. Vocational assessment, however, is viewed as a process that begins with the vocational evaluation and continues through post employment services. The term vocational evaluation is used in this book when referring to time specific services offered at the onset of the rehabilitation process. The

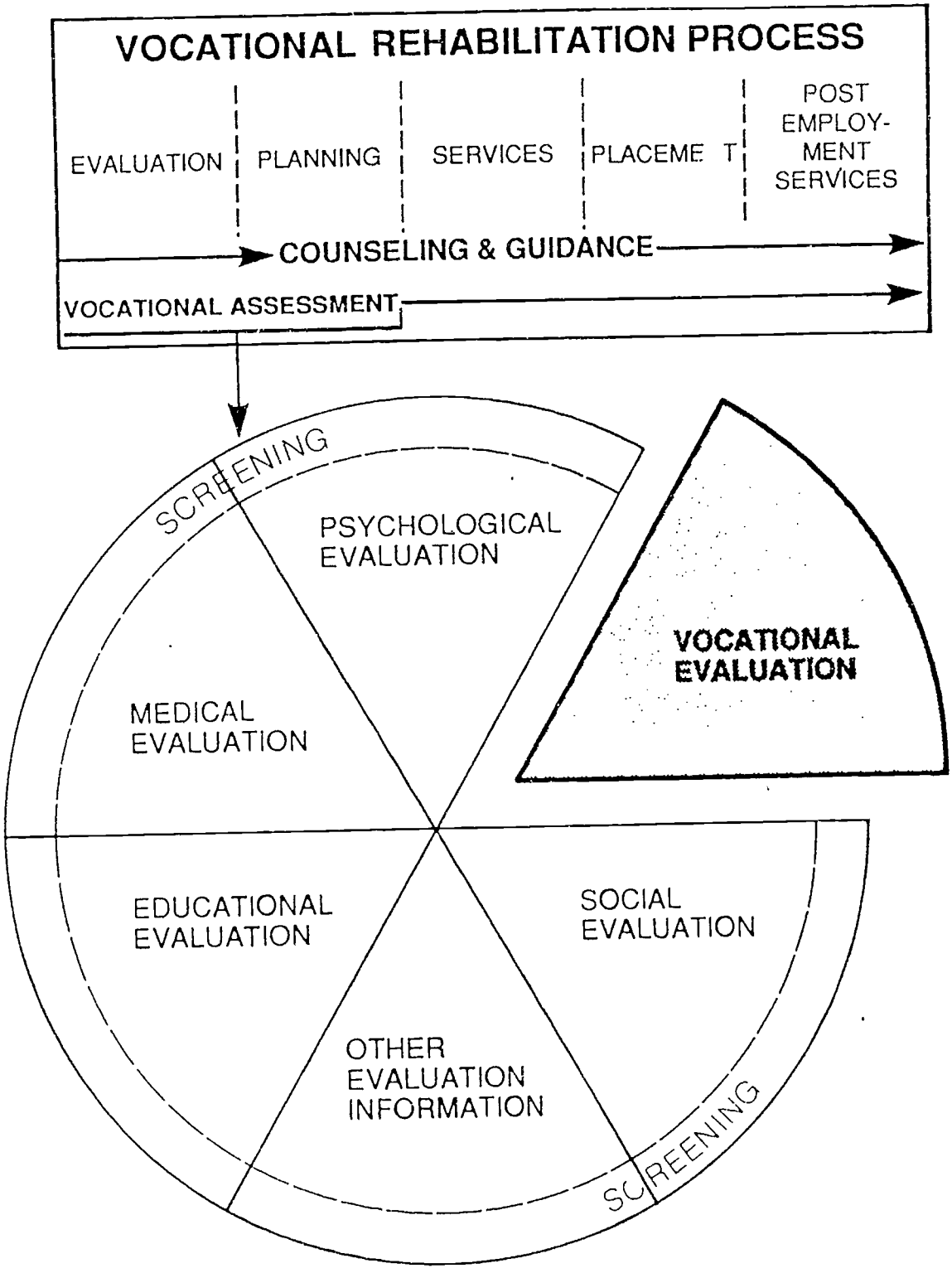

Figure II-1. Vocational Assessment

more generic and broader term vocational assessment is used when referring to the ongoing, dynamic, and interrelated synergistic services strategy in which the rehabilitation counselor or case manager is the primary service provider.

REFERRAL FOR VOCATIONAL REHABILITATION SERVICES

Changes in vocational rehabilitation services have caused an increasing number of persons with brain injuries to seek service from the state/federal vocational rehabilitation system. Service delivery will change further with implied eligibility and the requirement that eligibility decisions be made within sixty days of an application. Certainly the emphases upon consumer involvement and choice are likely to benefit persons with acquired brain injuries entering or re-entering the working world. Along with these changes toward a more user friendly service delivery ideal comes changes in expectations of persons providing services. Greater experience among rehabilitation service providers will increase the need for practical and functional vocational assessments. The following text will discuss the challenges for the rehabilitation counselor and other assessment professionals posed by these changes.

Starting the Process: The Initial Interview

Conducting an initial interview with a new referral is a routine and familiar task to the rehabilitation counselor. However, for the person with a brain injury and his/her family, it often represents a long-awaited step. The complexities involved in the process may, however, precipitate emotionally charged moments. Because of the amount of information needed, these interviews can become lengthy. Consequently, the counselor should establish some guidelines regarding the time needed for this process. In some cases, several sessions may be required to obtain necessary initial interview material. The initial interview with the consumer and family members may explore areas not covered in the usual initial interview. Areas important to explore during the initial interview(s) with an acquired brain injury referral are listed below. See the Vocational Assessment Protocol (Thomas, 1993) for full details.

1. Cognitive Function

    - Ability to learn
    - Memory for things to be done in the future
    - Ability to plan and carry out activities
    - Ability to self-evaluate
    - Initiative to start and finish tasks
    - Speed of thinking

2. Social Skills

    - Emotional status
    - Sensitivity
    - Social and interpersonal skills
    - Emotional tolerance to stress

- Relationship to family members and close friends
- Club membership and community and organizational involvement

3. Job Related Questions

   - Endurance
   - Physical skills necessary for work, play, and self-care
   - Work potential for job placement or return to a former job
   - Pre-injury skills and abilities having possible transferable skills
   - Present hobbies and spare time activities
   - Job goals both immediate and long term
   - Specific job requirements (salary, location, benefits, working conditions, hours, etc.)
   - Willingness to travel or relocate for work

4. Supports

   - Financial stability and income sources
   - Family support mechanisms
   - Support group involvement or therapeutic support sources

5. Other Questions

   - What are your greatest concerns
   - Alcohol, prescription, and illicit drug use
   - Description of a typical day's time schedule and activities

Obtaining a Working Commitment

Often well intentioned individuals strongly urge a relative or friend with a brain injury to participate in vocational rehabilitation. Hence, it is especially important for the counselor to obtain a commitment from the consumer to voluntarily participate in rehabilitation services. This should be assessed at the outset of the interview. The prospective consumer is informed that the evaluation is open only to those who agree to participate. If necessary, the counselor can further reinforce the fact by informing the person that he/she cannot be forced to attend the program. Such a statement can serve to reduce conflicts and reinforce the person's perception of the importance of involvement (Thomas, 1987). This action can initiate a powerful motivation mechanism that is intended to give the person a sense of control (Weiner, 1982).

However, some persons may refuse to participate in a structured vocational assessment. In this case, a compromise may be reached by asking them to try a few days before making a decision to drop out. Reluctance to participate in evaluation activities is not uncommon. Such reluctance must be handled through a directive approach and should not be viewed as a refusal to participate. When the person refuses to participate, the evaluator may inform the person that he/she will be scheduled for two days of evaluation after which time his/her continuation in the program will be negotiated.

Often, the thought of trying something new is frightening, but after some success during the first few days, attitudes may change. Each case should be viewed individually, using the judgment of the rehabilitation team to determine the level of commitment necessary in order to continue the evaluation. The evaluator should, however, avoid the position of pleading with a person to remain in a program. Statements such as "I would like you to finish the day (or two more days, or a week, depending on the situation) before you decide to quit, although that decision is up to you" demonstrate support for the person but demand that the person make a commitment to the rehabilitation program in order to continue.

Vocational Goal Setting

It is important to examine what the consumer thinks of himself or herself in the present sense. Where would the person like to be in one year, three years, and five years? Factors such as upward mobility and capacity to advance on the job are important and critical factors to examine. Since a brain injury can take a toll on memory and previously learned knowledge, it is important to assess if the person retains the skills commensurate with his/her level of education and work related training. For example, a school teacher sustained a significant head injury and can no longer recall names and dates of historical events with accuracy; however, this person wants to continue teaching history.

Other personal information important to examine includes the use of alcohol and other substances along with past and recent legal difficulties. A brain injury seldom improves an individual in terms of behaviors and conduct. A person who has had a history of legal difficulties, substance abuse, or problems dealing with people will likely continue having the same problem. The same holds true for work place behavior. Consequently, it is important to get other people's view of their work place behaviors.

Gathering Background Information

Background information is usually available from a variety of sources. However, caution is required when using this information (behavioral observations and psychometric test data) in considering service needs. Psychological tests, standardized work samples, behavior observation, and self-report rating scales exhibit certain inherent characteristics that may or may not paint an accurate picture of a person. A test score or work sample rating is a sample of a specific behavior at a point in time. A person who has sustained a brain injury typically improves rapidly during the early stages of recovery and perhaps even faster when involved in treatment, therapy, or remedial programs. Behaviors or psychological constructs measured during this time are likely to change. These behaviors and psychological traits might not represent how the person may function later.

On the other hand, areas in which the person functioned adequately during baseline or post-acute care rehabilitation are not likely to decline unless additional trauma, stress, or changes in physical or mental status occur. These areas of relative strength are important because they should be the focus of compensatory strategies for information processing, learning, and adapting to the work environment. Since areas of relative strength have the potential to show improvement over time, periodic reassessment of these areas will provide clues to the rate of

overall progress being realized by a person.

Variations exist in the quality and nature of background information available for assessment planning. Individuals who have recently acquired a brain injury may have medical records and clinical assessments of sufficient volume to fill a file drawer. For others, limited information may exist, and the case manager or evaluator must request background information from a variety of sources. In other cases, the person with the brain injury might have recently participated in a comprehensive medical rehabilitation program where the discharge summary will provide sufficient information.

Requesting and receiving information takes considerable time. Therefore, it is best to identify what sources of information will probably be most valuable. The mere volume of this information often makes it unwieldy and inconsistent since it may have been generated during recovery. Discharge summaries or comprehensive reports that discuss the nature of the injuries and services received can draw this all together in a few concise pages. Such summaries are more valuable than pages of progress notes and acute care specialty consultations that likely have no relevance on present functioning.

During the interview(s) (with consumer, family members, or significant others) additional records may be identified that are valuable in rehabilitation planning. Frequently the person has received emergency medical service at one center, post-acute rehabilitation services at another, and outpatient follow-up and neuropsychological testing at still another. Independent living skill evaluations, neuro imaging techniques (CT, MRI), psychiatric evaluations, and other clinical consultations may also be available. However, only selected records are of value in developing individual rehabilitation plans with the consumer. When scheduling appointments with families, request that they bring any information they have in their possession for review.

It is important to examine both the individual and the family's perspective about how the person has changed since his/her injury. People often tend to retain their pre-injury work and avocational interests. A solid understanding of their work history, vocational interests, and social style prior to the injury will provide valuable clues to potential vocations. If significant changes have occurred in learning capacity, psychosocial skills, strength and stamina, etc., it is important to determine the person's current view of themself in relation to these factors.

Persons with head injuries and their families have typically gone through a great deal of stress, physical and emotional pain, and disappointment. These feelings may surface during an interview. As vocational plans are challenged by the family or the rehabilitation counselor, feelings of anger, disappointment, and unwillingness to accept a different job goal may emerge. Consequently, it is wise to develop a good working relationship with the consumer before discussing vocational plans.

Denial is often mentioned as a "deficit" or "functional limitation." Denial is a common defense mechanism, which may not indicate an unhealthy adjustment. Confrontational approaches, in the early stages of rehabilitation, are rarely effective in overcoming denial and should be avoided.

SOURCES OF INFORMATION

Medical Information

Medical conditions often improve rapidly during the early months following an injury. This is particularly true for individuals who were recently disabled by a traumatic brain injury and require frequent contacts with medical personnel. If significant improvement in physical condition is likely, additional re-evaluation at periodic points may be needed.

Details of physical problems and limitations should be available in recent general medical evaluation reports. Family members often know about additional physical restrictions or precautions. If a new physical exam is required, the rehabilitation counselor should obtain medical opinions regarding work tolerance, work schedules, or special precautions. However, referral to a physiatrist (a physician specializing in physical medicine) may provide the best information regarding current physical status.

Neuropsychological Results in Evaluation Planning

A properly constructed neuropsychological evaluation can be of considerable value in planning the evaluation. Information on cognitive and sensory-motor skills, learning characteristics, attention and memory, and personality characteristics are typically discussed in a neuropsychological report. These factors can lay the groundwork for areas worthy of further exploration in the vocational evaluation.

Many neuropsychologists write reports containing technical information and jargon that is difficult to understand. If this occurs and the report is not helpful, contact the psychologist. Be prepared with several functional questions, e.g., "Can this individual return to his job as an auto mechanic?" "What problems should we look for?" "What accommodations may be necessary?"

Larger rehabilitation offices may develop a working relationship with a neuropsychologist as a consultant. This individual can interpret technical reports, suggest behavior management programs, and assist in treatment program development. These consultants can also work with the neuropsychological community by training others to produce reports useful to the counselor and consumer. Rehabilitation or clinical psychologists, who can clearly relate neuropsychological functioning to work-related matters, are good consultants if they have a thorough knowledge of brain-behavior relationships (Corthell & Tooman, 1985).

In some cases, however, a psychologist who has not had specific training in head injury rehabilitation or neuropsychology may do more harm than good. A lay person reading a report usually will regard a psychologist as an authority on the subject and accept the opinions expressed as fact. However, a psychologist without proper training may refute the presence of neuropsychological dysfunction (despite evidence of confirming reports), especially if neuropsychological problems are not severe.

In rural areas, evaluators may find themselves unable to obtain a neuropsychological

evaluation. When this is the case, the evaluator will necessarily assume a greater responsibility for interpreting the reports of other specialists such as occupational therapists, physical therapists, and language therapists. When the evaluator must patch together information from a variety of sources, it becomes even more important that the evaluator obtains a comprehensive working knowledge of brain behavior relationships. The report of a neurologist or psychiatrist should not replace a neuropsychological report, since the manner in which these disciplines approach an examination are not comparable. When he/she is working without comprehensive background information, the counselor will need to develop an assessment strategy based on "What do I need to know?"

Additional Sources of Background Information

School. The majority of all persons who sustain a traumatic brain injury are adolescents and young adults. Therefore, it is likely that they have had recent contact with school psychologists or guidance counselors for academic testing. School personnel may also provide a contrast between pre-injury and post-injury skills, especially if education was completed since the injury. The level of post-injury educational and remedial support needed in order to complete course work is important to consider. Some consumers may have intentions of attending college and may possess above average intelligence and academic skills. However, memory problems and poor reasoning ability could lead to academic failure. Information of this nature may be available only through informal means such as telephone consults with current or former teachers.

Work and Training. Information about training obtained prior to and since the injury can also provide insights into both present and former abilities. A man who was trained as a skilled craftsman, for example, may maintain an interest in hands-on occupations. Family, friends, or co-workers may provide additional information regarding special traits or abilities that may be important when advising on future training potential. Pre-accident worker characteristics can serve as indicators for future functioning levels. The person who was a marginal worker or who had a poor work history before the accident will likely demonstrate less potential tha . one who was a steady and reliable employee to whom an employer may be willing to offer special re-training and accommodations (Thomas, 1989). Information regarding former work habits, special skills, interests, and technical abilities may provide clues for future vocational involvement. Former co-workers can be an excellent source of information about vocational skills.

Psycho-Social Relationships. Experienced rehabilitation counselors know that the consumer's positive relationship with others is vital for success. Consequently, the assessment must include such areas as the person's living situation, interpersonal relationships, family relationships, community supports, and social supports. These relationships are just as important as physical or mental abilities in affecting the vocational outcome. The reader is referred to standard texts in rehabilitation counseling and specifically to Counseling and Career Guidance in the Rehabilitation Partnership (Corthell & Newcomb, 1993) for further information about psycho-social relationships.

Formulation of Referral Questions

The process of identifying referral questions can help direct the evaluation. Sometimes a review of background information and a preliminary assessment indicate that a person may return to previous employment or a related job with transitional support. Usually these are individuals experiencing mild to moderate work related limitations. If the immediate goal is to place the person on a particular job, the process of evaluation is streamlined and in fact is prescriptive if the referral question is "Can this person return to his/her former job?"

As an illustration, consider two hypothetical referral questions. In the first example, the referring agent asks the standard question: "Is Ms. White employable and if so, identify jobs for which she is best suited in terms of interest and potential." As a second example, consider these referral questions: "What is the likelihood that Mr. Brown can return to his previous job as a diesel mechanic at ABC Transport? Also, please comment on job modifications which may prove helpful. If return to the previous job is not recommended, what other related jobs is he capable of performing considering his 20 years of mechanical experience?" Although rehabilitation staff are accustomed to dealing with development of referral questions, it is especially important to formulate and address such questions when dealing with the assessment of a person with a brain injury (Thomas, 1989).

Determine Need for Further Neuropsychological Information

The rehabilitation counselor should review background information for content in order to answer basic questions about rehabilitation needs. Next, the rehabilitation counselor is faced with the question of whether or not additional evaluations or consultations, including neuropsychological, are necessary. (The reader is directed to Appendix A for an **Understanding of Neuropsychological Factors Related to Work Performance).** There are several factors that need to be considered in making a determination to seek further assessment. They are as follows:

1. Is there documentation of previous neuropsychological examinations on file? Sometimes, a counselor will find reports from a series of examinations over several months or several years with little or no changes between examinations. In such cases, additional evaluations are of limited value in determination of functional limitations or work-related needs.

2. Does the available information including technical reports answer the referral questions? Neuropsychological evaluations are done with varying levels of intensity and quality of reporting of the information. If a recent evaluation appears inadequate, a consultation with the examiner may be in order. A report may be unclear or highly technical. If so, review the report with a person who has knowledge and who understands the discipline. The consultant may provide answers to questions and help in further assessment planning. However, if the information received is of little value and unclear, seek a consultant that can answer your questions and communicate with you more expectively.

3. Have there been any major emotional changes or changes in the person's support structure since the last evaluation? Often the family or the person with the head injury will have questions regarding his/her status, including feelings of depression or concerns over memory or attention. In such cases, a re-examination or a consultation with a specialist in brain trauma rehabilitation may be advisable to determine if additional specific assessments are necessary.

4. Is funding available to cover the costs of further assessment? Evaluations vary widely in cost. Some state vocational rehabilitation agencies pay a pre-determined maximum amount for evaluations. The counselor must therefore decide whether or not the information will indeed answer the questions addressed or if resources are better used for other case services.

5. Is it possible to answer the questions you have without another neuropsychological evaluation? Or if one is unavailable, can you formulate an assessment plan based on what you already know? Some professionals argue that a neuropsychologist and other professionals are found in any locale. However, Thomas & Menz (1993) found that between 30-40 percent of all vocational assessments for persons with brain injuries in midwestern states (RSA Region V) are completed without the benefit of a neuropsychological evaluation. Frequently, in such cases personnel were not available, the consumer refused the testing, or financing was not adequate to obtain this type of examination.

Present Self-Appraisal and Adaptive Functioning

There are several important areas to consider during the course of an assessment regardless of the source of the assessment data. Areas to assess are related, for example, to work skills, independent living skills, and social adaptive behaviors. Areas to assess apply to the work place as well as to social situations. The following discussion will detail some of these important considerations.

Some individuals know they have problems with memory. Others cannot adequately function under circumstances where there are visual or verbal distractions, but they are able to express this difficulty. These individuals, who understand their impairment, are often viewed as considerably different from persons who have such problems and cannot acknowledge them. Self awareness can serve to mediate or minimize the functional limitations or deficits, by recognizing situations where these problems may occur. Wehman and Kreutzer (1990) found that the level of disparity between a work supervisor's ratings and a person's self-ratings of functional limitations was important in determining who would or would not encounter problems on the job. This was not a function of the level of severity of limitations as estimated by work supervisors. Instead the determinant was the acceptance by the worker that there were problems and that compensatory strategies or work modifications were necessary.

Vocational Assessment

Vocational assessment should determine patterns of assets and functional limitations prior

to placing persons at worksites. This often will include an analysis of behaviors in work situations as well as assessment of activities typically associated with executive functions such as searching for a job, processing supervisory feedback, modifying behavior on the basis of task performance, and demonstrating self-regulatory behaviors.

Several approaches are useful to consider in the assessment process. These approaches are grouped into the six categories of assessment methods listed below:

1. **Formalized testing**. Formalized testing includes neuropsychological testing and specific vocational testing completed as part of an evaluation. Specific vocational tests of achievement or aptitude, vocational interests, and capabilities are assessed through commercially available tests.

2. **Traits and abilities testing**. Traits and abilities testing include dexterity tests and work samples that attempt to examine a unitary factor or trait such as fine motor skills, gross motor coordination, or fine assembly skills.

3. **Safety evaluation**. This process includes an assessment of one's safety awareness especially involving machinery or hazardous materials. For example, a person may want to perform a machine tending or machine operation task, however, there is suspicion that cognitive or attention difficulties may interfere with the safe operation of machines. In this situation, a safety evaluation should be conducted (possibly in a simulated situation) prior to placement on a job.

4. **Behavioral assessment**. Behavioral assessments are often performed during the course of an evaluation and continue during the course of a community-based assessment or job trial. This may include an assessment of interactions with other workers and documentation of behaviors that may interfere with social adaptation or on-the-job functioning.

5. **Environment analysis**. An assessment of the environment in which the person will work is typically conducted both prior to and after the person is placed on a job. A job analysis and a content task analysis of specific duties are usually performed. In addition, an evaluation of co-workers' behaviors and the immediate work environment is essential to consider when conducting an environmental analysis.

6. **Functional assessment**. A functional assessment is a description of a person's ability to perform the basic skills necessary for community integration. It is typically used with persons who have significant functional limitations. Factors assessed include an appraisal of social interaction in the neighborhood, use of public transportation, and the ability to adapt to changing environments. This often includes an assessment of a person's ability to open doors of access and egress, access toilet facilities, obtain food, and secure medical help if necessary (Thomas & Menz, 1993).

The most desirable approach for assessment of a person for placement in community-based employment must be determined by the evaluator. In some cases, a return to a former

level of employment is warranted, which may require a visit to the worksite for an environmental and job analysis. This can be followed by a brief evaluation in a controlled situation to determine if the person has the necessary skills, aptitudes, and behaviors to manage a return to work. In other cases, a limited assessment in a controlled situation such as a vocational evaluation laboratory may be indicated. The goal of this assessment may be to determine safety awareness, ability to follow directions and instructions, and identification of compensatory strategies that are needed or have been developed.

Compatibility with a job may be determined through a situational assessment in a targeted job area, if one has been identified. A more extended job trial may be appropriate for those individuals who are still improving at the end of a situational assessment. A specific assessment plan is developed prior to starting the assessment. It should include special accommodations for anticipated schedule problems. For example, ongoing medical or therapy appointments may interfere with the assessment process or a job tryout. Involvement in ongoing therapy or support programs do not necessarily preclude involvement in vocational assessment but are factors that are considered when arranging work trials. A physical examination should identify the ability of the person to tolerate a minimum of 16 to 20 hours of work per week and document any special precautions that must be taken.

Thomas (1989) identified five general areas to consider in a vocational assessment. These areas include the following:

1. Ability to use a telephone to search for jobs.

2. Ability to formulate an independent or counselor-assisted structured job search.

3. Exploration (through work sampling or situational assessments) of the skills, abilities, and characteristics necessary to succeed at targeted job and independent living goals.

4. Ability to function on a community-based employment worksite.

5. Capacity to advance on the job after placement in terms of upward mobility.

Initiating a Structured Vocational Evaluation

Vocational evaluation of a person with a head injury can be simplified by defining the type of evaluation most appropriate for the individual. The assessment may begin in a controlled environment such as a vocational evaluation unit and conclude with situational assessments. The situational assessment may start in a controlled environment and progress to community-based sites. By starting in the vocational evaluation unit, the evaluator will have the opportunity to observe behaviors and begin to develop a strategy for the remaining evaluation.

Vocational evaluation may begin by assessing dexterities, assembly skills, and fine motor skills as one would proceed with most referrals. Basic academic testing and vocational interest testing are also good measures to consider in the early part of the evaluation. If work samples are used, one may wish to examine factors such as range of motion, reflexes, gross and fine

motor abilities, and work stamina. As the assessment progresses, problem-solving skills, especially those that occur in social and unstructured situations, should be evaluated. Other attributes such as mental flexibility and ability to transfer learning from one situation to the next should also be assessed. Working memory and ability to problem solve on the job are documented as well. Emotional-related issues are evaluated in a general sense from information obtained during counseling sessions; direct observation; and conversations with family, supervisors, and others during the evaluation. For a more detailed description of what is essential to a comprehensive vocational assessment for persons with acquired brain injury, the reader is referred to the Vocational Assessment Protocol (Thomas, 1993).

Evaluation tasks need to be arranged to promote success in the first few days, yet must be challenging enough to hold the person's interest. The evaluator should be prepared to explain how the tasks relate to assessment of work potential since this may be frequently challenged. If necessary, part-time involvement should be considered, especially if one is scheduling a brief baseline type of assessment. Most vocational evaluations are scheduled for six to seven hours per day. If the evaluator wants to test the person's tolerance for an eight-hour work day, this should be explained to the person and the family prior to scheduling several consecutive eight hour work days. Since lack of endurance and stamina is a common problem following a brain injury, the evaluation schedule is an important consideration.

Independent Living Assessment

At the very minimum, an assessment of independent living skills may be done during an information gathering interview with reliable family members or significant others. People with acquired brain injuries may not accurately report how well they manage independent functioning. Therefore other sources may need to be consulted to verify their self-appraisal. Thomas and Menz (1993) suggests screening a number of activities of daily living for all persons with brain injuries who are referred to vocational rehabilitation programs. Table II-1 lists the activities that were most troublesome to the subjects in a recent study of persons with histories of head injuries entering the working world (Thomas & Menz, 1993).

If problems are suspected, a complete evaluation of independent living skills should be arranged. Many vocational rehabilitation facilities offer this type of assessment, or can arrange one through a Center for Independent Living. When assessing independent living skills, look for discrepancies between household responsibilities and on-the-job work behaviors. For example, a person may appear very dependent and in need of high structure and supervision in the work place but may in fact be independent in house chores, budgeting, and minor home maintenance. A home interview is a valuable means of providing insights into what the person can do in a vocational sense.

Assessment of Psychosocial Skills

Social functioning is an essential area to consider when assessing vocational adaptability. Social skills are a powerful factor influencing a person's successful return to work (Thomas, 1986). Information regarding social appropriateness, income needs, and family support can be obtained from family members or significant others. Gathering such information will take time

but can be critical to vocational planning.

Table II-1
Respondents Requiring Assistance With Activities of Daily Living

Activity	% of Persons Exhibiting Problems
Self-care (Hygiene, toileting)	17
Safety awareness	18
Route finding in neighborhood	20
Handle money/makes change	27
Medical self-care	30
Home living skills	31
Sets up own appointments	38
Transportation use	39
Job seeking independence	82

Social functioning in the work place may be different from what the family reports. Therefore, an attempt must be made to obtain this information from work supervisors or other independent observers. Behavior checklists such as the Vocational Adaptivity Scale (Thomas, 1983, revised 1988), the Functional Assessment Inventory (Crewe & Athelstan, 1984), and the Work Personality Profile (Bolton & Roessler, 1986) are useful for tracking such data.

Understanding a persons's behavior and psychosocial problems are important in the rehabilitation planning process. Therefore, attention should be paid to possible reasons for undesirable behaviors. For example, a person may appear to be irritable and argumentative. Irritability and argumentative behaviors may have been a pre-injury personality characteristic and thus difficult to change. However, the person may be depressed and/or agitated and the behavior may be a symptom of another problem. Psychosocial problems can also be psychological in origin. If so, a neuropsychologist may help determine if a referral for psychological or psychiatric intervention is appropriate.

Social Skills Evaluation on the Worksite

Wehman et al. (1988) refers to the maladaptive social skills exhibited during free time as the "coffee break syndrome." In such cases, the inappropriateness of interpersonal interactions during lunch and breaks serves to exemplify that the person does not "fit in" with other workers. Problems with behaving in a socially adaptive manner is one of the most common problems encountered by persons with head injuries who are returning to work (Thomas, 1987). Assessment of interpersonal skills is considered an essential element in any vocational evaluation with this population. Refusal to accept that their behavior is awkward or

inappropriate is commonly seen and can be best met by use of concrete examples and statements made on supervisor rating forms completed by several supervisors rather than only one (Thomas, 1988).

It is unreasonable to expect a person to consciously attempt to change a behavior unless one recognizes that a problem exists. Therefore, it is important to have a person acknowledge the presence of a problem in order to gain compliance when working to change a problem behavior. Cognitive rehabilitation approaches using dynamics of group interaction appear helpful in the identification of such problems (Adamovich, Henderson, & Auerbach, 1985).

The expression of resistance and anger is a natural reaction when problem behaviors are identified or when unrealistic job goals are challenged (Musante, 1983). An organization providing concurrent vocational and neuropsychological rehabilitation is an ideal place for the consumer to discuss such things as supervisors' ratings and feedback from a vocational evaluation. A group process involving others with head injuries is a highly desirable place to discuss work problems and to obtain the support of the group. Feedback on task performance is an essential element of vocational evaluation because one of the principal goals of the evaluation is increased self-awareness. The evaluator whose sole caseload consists of persons with a brain injury or who works with an outpatient clinic or university program providing cognitive rehabilitation should use this resource to process feedback of the evaluation.

Assessment of Back-to-Work Potential

One method for assessing whether a person with a head injury can return to a former position, line of work, or a related job is to examine the person's ability to perform specific duties of the job in question. This is a commonly used evaluation technique (Pruitt, 1986) that is essential when evaluating a person with an acquired brain injury. When this approach is used, the job that the person is expected to enter or re-enter is studied, and a job analysis is performed (U.S. Department of Labor, 1972).

The analysis should examine all skills, traits, and temperaments important to functioning on the identified job. Tasks that the person cannot adequately perform must be identified so the evaluator can determine if job restructuring or modification could facilitate a return to work (Thomas, 1989). In addition to conducting a job analysis, the evaluator must also study the person's work environment. This environmental analysis (Wehman, et al., 1988) may be of more importance than the job analysis and must not be overlooked. Some authors have suggested the use of a video tape recorder to film the job being analyzed. At first videotaping seems an ideal way to study a job; however, some believe the approach has limited utility. First, many companies, especially manufacturing firms, will not allow videotaping on site. Second, this process creates high visibility that draws attention to the entire process and becomes a burdensome task.

After a job and environmental analysis is completed, worksite modifications or application of rehabilitation technology may be needed. The individual may need jigs or fixtures designed to compensate for known problems. Modifications to jobs may also be done to minimize environmental difficulties. For example, the elimination or modification of a specific

element of the job such as retrieval of supplies from an elevated storage area may be required if balance or dizziness is a problem.

VOCATIONAL TESTING

Many people with acquired brain injuries have been evaluated for educational and functional skill deficits. Often they have completed neuropsychological evaluations. An examination of a variety of publications, dealing with approaches to vocational rehabilitation of persons with head injury, failed to find but a rare mention of the concept of using or not using vocational tests. When administered and interpreted with caution, in light of neuropsychological factors relevant to each respective case, tests that assess aptitudes, traits, and abilities of a vocational nature can enhance the evaluator's understanding of the person's work potential.

Interest Tests

The use of vocational interest inventories with a person who had a brain injury can provide valuable information about general as well as specific work interests and work-related needs. Regardless of the severity of the injury, the majority of persons with acquired brain injury can participate in vocational interest testing in one form or another. Picture interest tests require no or very limited reading abilities, or written tests that the consumer must either read or have read to them can be used.

When selecting interest tests, consider the consumer's reading level but also carefully observe his/her distractibility, attention, and memory. If attention is a problem, provide a work place with few distractions and break the testing into two or more segments if necessary. Consider the use of an audio tape recording as an aid for those with reading and/or attention problems. Persons with auditory difficulties or receptive language problems may not benefit from an audio tape and may in fact perform better with only a printed version of the test without a recording.

Another factor to consider when selecting interest tests is the difficulties encountered by the person with visual/perceptual problems. If a person is noted to have visual/perceptual problems and is unable to complete written or audio taped interest tests, the evaluator may consider a picture interest test. If a picture interest test is used, the evaluator will pay close attention to how the person is attempting to complete the test. Frequent verification as to why particular responses are given is used to determine if the person is accurately following directions and understands the process. Circumstances affecting the reliability or validity of test results should be noted in the evaluation report. Any test that purports to measure interest, aptitude, or reasoning abilities may be invalid or unreliable if a person is known to have visual/perceptual problems.

Occasionally persons with brain injuries may find interest tests vague because of abstraction problems, or they may see the process as unrelated to work. Thomas and McCray (1988) describe a method of using newspaper as a means of assessing work interests. Using this method, the individual is asked to review the Sunday employment section of a metropolitan

newspaper and to circle any jobs that sound remotely interesting. At a subsequent session, the person is asked to review all jobs circled and to select the ones that he/she considers most appealing. Finally, the person is interviewed to determine what was found most interesting about each job. The evaluator can then investigate reasons why certain jobs were selected and provide a basis for further job exploration.

Achievement Tests

Prior to considering specific achievement tests to administer, the evaluator may wish to consult a neuropsychologist who was previously involved with the individual. In many cases, tests of reading or tests of sight vocabulary were used by the neuropsychologist. The neuropsychologist can suggest whether further diagnostic tests are indicated or if a practical assessment of math or reading is warranted. Depending on the individual's needs, the evaluator may wish to simply obtain a general estimate of academic skills. This can be followed by a work task that allows the evaluator to determine functional skills that are work related (e.g., making change, calculating interest, reading newspaper ads).

A test that assesses ability in specific areas may be the test of choice. Diagnostic achievement tests may wish to be considered if the concern is the remedial procedures necessary to improve reading attack skills or if there is potential to improve reading and retention of written material. Informal assignments such as having the person read an instruction manual and follow the written directions are also valuable functional approaches to assessment.

Personality Tests

Personality tests are sometimes used by vocational evaluators as an extension of a work needs assessment. Tests such as those that assess vocationally oriented personality factors or personal and work needs are examples of personality tests frequently used by evaluators (Botterbusch, 1987). These and similar tests can provide information regarding personality traits that may be important to job and personal satisfaction. Again the evaluator must consider the person's reading ability and cognitive skills in determining which tests are appropriate. Occasionally evaluators may have access to results of personality tests that are administered by psychologists. Caution is urged when conclusions are drawn from results obtained by persons with brain injuries unless the psychologist is experienced in working with persons with an acquired brain injury. Because of the manner in which persons with brain injury approach the test, some persons may appear to be more severely maladjusted than is actually the case (Alfano, Finlayson, Stearns, & Nellson, 1990).

An incomplete sentence test can often provide valuable information regarding current concerns and problems of persons with an acquired brain injury. An incomplete sentence test is used to assess the ability to express one's self in writing under a somewhat structured situation. Such tests provide a sentence stem and require the examinee to finish the statement. Typical stems may include material such as (a) At work my supervisor ..., (b) During coffee breaks and lunch I like to ..., and (c) The best job is ...

An assessment of personality functioning is usually offered by a neuropsychologist,

although this assessment tends to be clinical in orientation. The vocational evaluator typically will use personality measures for matching personality characteristics, work needs, and traits to jobs that will be compatible to that particular person.

Aptitude Testing

Aptitude testing is an area likely to produce interesting and useful information. There are many reasons why a test may underestimate aptitudes or abilities as discussed previously. When a person excels in a particular area, the evaluator should further evaluate that person's skills by using work samples, observations in protected worksites, or community-based situational assessment. Results of aptitude tests, however, should be interpreted with caution. A person may have an aptitude for various types of occupations as measured by standardized tests but may be hampered by a memory problem or an inability to accommodate various rapid changes in work method or routine.

A low score on an aptitude test may not necessarily indicate low aptitude. Instead the result may be a function of other cognitive problems such as the inability to attend to critical elements in pictorial stimuli. On an actual job, the person may perform adequately because it may not involve as fine a discrimination. One mechanical comprehensive test, for instance, displays a 2" x 2" example which in real life would represent a 10" x 10" block and tackle display. An inability to select the correct response on this test may be, in fact, related to problems with visual acuity.

Aptitude tests commonly administered during vocational evaluation, such as composite test batteries, examine a wide variety of aptitudes or skills. These batteries can provide useful information for vocational planning. Tests that assess motor speed and accuracy are especially useful. As in any other aspect of the evaluation process, a solid knowledge of head injury rehabilitation and common sense must guide the evaluator of aptitude tests. The experienced evaluator will choose testing tools that provide the most accurate, valid, and generalizable results.

Work Sample and Job Sample Approaches

The use of work samples with persons with acquired brain injuries has been a controversial topic with evaluators in the field. The basis of this controversy is grounded in the fact that on one hand, the majority of all vocational evaluation services use work samples as a principal mode of operation (Thomas & Bordieri, 1986). On the other hand, it has been argued that any evaluation of persons with brain injury should be done in the context of the job in which they will be placed (Corthell & Tooman, 1985). Because of difficulties in abstraction and generalization and the fact that the social and ecological demands of an actual job site are far removed from the evaluation laboratory, an incomplete picture of the person's functioning is likely to be seen. Keeping in mind these limitations inherent with a work sample approach, it still is possible to build a case for the use of work samples within the vocational evaluation process with individuals who have acquired brain injury.

First, work samples can provide a standardized approach to assessing factors such as

assembly skills, organization of materials, problem solving skills, and certain applied skills such as use of hand tools, measuring, weighing, filing, and other skills. Work samples can provide the evaluator with the opportunity to test hypotheses about work skills before attempting a situational assessment. For example, if the person aspires to return to clerical work involving typing and filing, then clerical work samples are used. The person's skills are then assessed on an actual worksite. However, job samples offer the opportunity to practice these skills prior to going to a job site. Using job samples, the evaluator can modify or simplify job tasks. The evaluator can arrange the worksite in an optimally efficient design for this individual using work samples or job samples.

If safety awareness is a question, the evaluator can assess ability to use hand tools and machine tools in a controlled situation. Then the evaluation can move to the machine or wood shop for a job tryout under careful observation. At times evaluators may find that the demands of the evaluation go beyond the level of their expertise. In such cases, a specialist must be called upon. For example, a referral question might ask, "Can Mr. Jones return to his former job as a punch press operator?" The evaluator should assess safety awareness in the evaluation unit under a controlled situation before placing the person on an actual job sample using a punch press machine. However, the evaluator may have little knowledge of the use of such equipment. With this type of situation, a safety consultant familiar with this type of machinery may be retained to conduct an assessment if the evaluator is satisfied that there is a reasonable likelihood of success under a supervised situation. If problems exist, a rehabilitation technology specialist may need to be consulted as well.

Work samples or job samples are used for a specific purpose. Further, the samples should resemble the type of work for which the person is being evaluated. Use of real work for which there is remuneration consistent with prevailing wage rates should be used whenever possible in addition to, or in place of, work samples. Job samples are used to determine ability to perform the job and to screen for potential problems. These steps are then followed by placement onto an actual job site. Using this approach may necessitate the development of a close working relationship with a job development or placement specialist and a job coach or work trainer.

SITUATIONAL ASSESSMENT

The trend in vocational evaluation for all disability groups is to use real jobs in integrated work settings (Wehman et al., 1988). When working with persons who have sustained a brain injury, one must consider the aspect of transfer of learning, sometimes also called "ecological validity." Transfer of learning is often impaired following a head injury. Consequently, one should attempt to evaluate the person in a job similar to the job in which he/she previously worked and where he/she will be placed if not in the actual job. A person with previous experience in executive skills may function well in a highly structured situation. However, when unstructured problem solving situations arise, performance for this person may deteriorate dramatically.

The most desirable mode of situational assessment is a short placement on the targeted

job or a similar job. This will offer a realistic but supportive work environment for assessment. The observer and consumer can determine whether the consumer has the ability to perform the associated work tasks and function in the job's psychosocial environment. If necessary, a work trainer or job coach may be used until the job is learned or until adequate accommodations can be made. In some instances, a company may wish to provide an employee who will function as a trainer and interim supervisor during the initial training period.

If it is appropriate for the person to enter a job he or she was evaluated for, a gradual return-to-work program is arranged in consultation with medical personnel, company administration, first-line supervisors, union representatives, and rehabilitation professionals. Placement on a situational assessment site should be done only after a thorough review of functional skills has been completed. Sensory, perceptual, memory, or social deficits may cause a problem if not a danger (Thomas, 1987). For this reason, it is important that a person with an acquired brain injury receive a comprehensive assessment of any functional skills prior to initiating a community-based employment program. The evaluator who does not consider these factors may find himself or herself liable for injuries suffered by the consumer should an injury result due to the evaluator's negligence.

In summary, a vocational evaluation should (a) begin with observation of work skills in a controlled environment, (b) include use of work samples or specific job samples if available and appropriate, and (c) lead to eventual integration into the most normalized and least restrictive work environment.

The person with mild residual impairments may exhibit inappropriate social adaptive skills critical to job functioning. In addition, he/she may have difficulty with necessary work skills, memory, attention, and self-monitoring behaviors. However, the vocational impact and ramifications of these behaviors may not be as clearly recognized in the sterile environment of an evaluation unit as they would be in a situational assessment milieu.

JOB SEEKING SKILLS EVALUATION

Job seeking skills assessment is necessary if community-based employment is a targeted goal. Job seeking skills assessment evaluates the ability of the person to use a telephone to search for job leads, reviews methods of keeping track of job leads and employers contacted, and assesses the ability to adequately participate in an actual or mock job interviews (Thomas, 1986).

The use of a telephone is an important job survival skill and should be observed during evaluation. The job seeking skills assessment is important for a person with more severe head injuries since such an evaluation can provide insight into the person's ability to function in less than highly structured situations. However, this type of assessment is typically reserved for persons who have experienced milder functional consequences as a result of their injuries.

CONCLUSION

Opinions differ in terms of what should constitute a vocational evaluation of persons with a history of a brain injury. The process requires flexibility in selection of tools and methods of evaluation. The functional assessment of academic skills, independent living competencies, job search techniques, and job aptitudes and skills in applied settings is of vital importance. While vocational evaluation and testing is time limited, assessment is an ongoing process that should continue throughout the course of delivery of vocational rehabilitation services.

Chapter III

PLANNING

WHAT IS PLANNING?

Planning is a complex process, but it need not be mystical or overwhelming. At its root level, planning involves surveying the existing situation and developing a "road map" to guide involved parties to an agreed-upon destination. This analogy may only be of limited value when applied to the often complex challenges of gaining employment following brain injury, but its basic premises remain relevant. Without consensus about goals, there is no direction and no conclusion about the success or failure of the outcome. Improper assessment of prevailing challenges, resources, and available strategies makes it difficult to identify the markers or directions to follow along the selected route, or alternative routes, when initial approaches fail. Melding the complex challenges that often follow brain injury with the ongoing demands of daily life and the confusing roles and resources that result almost guarantee the need for adaptive programming. Without well defined and anchored goals, it becomes easy to weave back and forth between immediate crises and daily disasters rather than remain focused on long-term vocational gains.

As in many situations, it is easier to establish what planning is not, rather than what it is. Planning is not completed when an Individualized Written Rehabilitation Program (IWRP) is completed, nor is planning synonymous with an IWRP. While the IWRP may document a plan, it is only a tool and should never be considered as the goal or end of the process. Some counselors may feel that the goal of their planning session with a consumer is to establish the IWRP. In some cases, consumers may also feel pressured to accept a presented IWRP in order not to disenfranchise the counselor or disrupt the vocational rehabilitation process. Yet, these assumptions are exactly the opposite of what should occur. Instead, the IWRP should develop as a viable plan is established. In this manner, the development of a plan is the ongoing result of identifying and integrating the diverse resources, probabilities of outcomes, timing of services, and other factors as they relate to the individual's needs, abilities, and expectations.

No plan is perfect. Every plan will require changes en route to the goal. In some cases, changes will occur because expected resources are not available, expectations and realities change, services or regulations in effect at the start of the plan are revised, or substantial changes occur in status (e.g., illness, changes in residence, and other developing challenges). Most of the time these mid-course corrections will require modification of the existing plan to help sustain progress towards the initially agreed-upon outcome. On occasion, however, actual revision of long term goals may be required. Mid-course or long-term corrections may represent effective case management or mismanagement depending on the direction the case follows over time. The ultimate measure is whether or not such modifications help guide the consumer to a relevant outcome using available resources.

Finally, planning is an ongoing proce it never stops. Although an initial plan is set, it will change over time. Once one set of goals is achieved, there are often other goals. Some of these new goals may or may not seem to be directly relevant to vocational rehabilitation services. Even when such goals are beyond the purview of vocational rehabilitation services, it is still critical to consider how such goals integrate within the person's life. The question is what can tie existing services and outcomes into other systems that may help the consumer in the future? This question is especially important in helping people who have experienced brain injury return to work. Past studies have noted the dramatic positive and negative effects that other people and systems can have on a consumer's vocational stability. Otherwise, seemingly irrelevant issues may subsequently develop into big problems that directly affect the persons ability to keep the job.

STEP I: IS THERE ENOUGH INFORMATION TO ESTABLISH AN INITIAL GOAL?

Setting goals and establishing a plan requires synthesizing information about the prevailing situation into objectives for future action and attainment. In this manner, the first step of planning is a little like looking at the past and present in order to define the future. As a result, it is important to determine if sufficient data are available before beginning to set goals.

Most often this step will begin with a review of historical, evaluative, and anecdotal information. Typically, persons with brain injury have either very extensive files or no available information. This second situation occurs if the individual was not treated for the residuals of brain injury as in many cases of mild brain injury. Information is usually less comprehensive if the injury occurred in early childhood and was not properly acknowledged or documented.

When available, data will often come from a variety of sources including previous treatment programs, past employment, educational institutions, medical records, legal records, family members, friends, and most importantly, the consumer. Often available information is old and incomplete, but sufficient enough to meet with the consumer and establish some preliminary direction. Additional information can then be collected as the case develops and specific needs are identified. Precise goals and objectives usually develop as the consumer and counselor gain more experience and trust with each other. In fact, talking with the consumer is the first place to begin the entire process. Goals will become clearer as the consumer gains more knowledge about his or her abilities and local vocational opportunities.

Consumer Involvement

The vocational rehabilitation counselor is careful not to form preconceived notions based on written data. The importance of beginning with the consumer's opinions and statements cannot be overstated. If the person's contribution is considered at the end rather than at the beginning of goal development, he or she may believe the counselor wants them to confirm already established goals and instead might object to these goals. Problems may then develop as the person is perceived as "uncooperative" or an impediment to his or her own vocational future! When this occurs, it is clear that the entire vocational rehabilitation process has been subverted. The goals and aspirations of the consumer must be considered first! It is this

person's life and destiny that are at stake.

The implicit right to direct his/her own destiny places certain obligations on the consumer, which in turn must be balanced by the relative naivete of the person. A consumer has the right to choose the vocational goal he or she desires. However, that does not automatically obligate the counselor to meet the goal when it is beyond the resources or scope of the agency. Frequently, consumers are unfamiliar with the rehabilitation process, as well as the specific challenges they may face.

Persons with acquired brain injury may give initial impressions of inattentiveness, lack of interest, or apathy. These impressions are incorrect. As noted later in this book (also see Appendix A), complex and interactive challenges in attention, concentration, information processing, self-monitoring, executive functioning, and other neurobehavioral limitations can interfere with consumer participation. These issues can be effectively managed and resolved with understanding and concern. Hence, it is inappropriate to dismiss an applicant because his/her ideas and behaviors regarding feasibility do not concur with those of the counselor or the agency. Instead, it becomes the task of the counselor to work with the individual to help develop a goal and plan within the person's dreams and the counselor's and agency's abilities.

FAMILY ISSUES

Adaptation Processes

Much has been written about family participation in the rehabilitation process. Kreutzer, Leininger, Sherron, and Groah (1990) suggest that good interpersonal communication among counselors, consumers, and their families is critical to effective rehabilitation. McMahon and Fraser (1988a) discuss the concept of "denial" in families with a member who has a brain injury. The consumer and family members may exhibit shared denial as they continue to hope for a complete recovery. When there is evidence of impairments requiring lifelong intervention, families may inadvertently continue in a state of denial rather than address the issue. This may create a great deal of conflict between professionals and families that in turn can lead to unrealistic personal and vocational goals for the individual.

Denial is a common and often a necessary coping technique, and is a way to initially deal with an overwhelming situation. Denial may diminish over time as different treatments and vocational options are tried. Denial is most problematic when it doesn't diminish and keeps the person from moving toward realistic personal and vocational goals. A thorough discussion of the family's role and strategies in working with consumers and their families can be seen in Kreutzer, Zazler, Camplair, and Leininger (1990).

Jacobs (1991, 1993), on the other hand, argues that the issue of denial is overused and overstated when addressing post-injury life. Actual and persisting denial may occur in only a very small portion of all cases. However, lack of information and lack of direction are responsible for much of denial such as behavioral conflicts and other types of conflicts.

When faced with a new and frustrating situation, people generally react as they did in previous challenging situations. They just don't have more effective response skills to a new set of demands. Unfortunately, these approaches are often ineffective in coping with post-injury life. Without proper direction, people tend to repeat patterns of behavior, regardless of outcome, when they cannot identify alternative approaches. Hence, the commonly assumed issues of denial may be attributed to lack of direction and the repeating of responses that worked in the past. Most people will try alternative approaches when proper direction, information, and training are provided (within the scope of their ability to learn). In such cases, what is attributed to denial is an inadequate service delivery system.

Regardless of whether the consumer exhibits denial, lack of information, or ritualistic perseveration, the counselor must be patient and work towards any positive adjustment shown by the family or consumer. When patience and constructive action are displayed, the family and consumer will gradually assimilate what could once only have been considered "unacceptable." The family's and consumer's ability to cope with the residual effects of the brain injury should be emphasized over acceptance.

Family Dynamics

By the time the consumer reaches a state vocational rehabilitation agency, there may have already been a great deal of family breakdown. This places the counselor in a very difficult situation when there is little or no family support and involvement. An even more difficult challenge arises when there is active family member opposition to vocational rehabilitation efforts. In these cases, the counselor needs to rely on the support of other agencies and resources in the community. The person may also have other "helpers" in his/her lives who can work toward the consumer's vocational reentry goals. The counselor actively seeks out significant others who can act as an advocate between the consumer and the rehabilitation process.

The counselor must refrain from judgmental thoughts and remarks whether or not the individual's family is supportive and caring in the eyes of the counselor. It will not help the person to hear that family members are barriers to the rehabilitation process. The experienced counselor knows he/she has not had the struggle, fear, anger, frustration, and heartbreaking sense of loss that family members have experienced. The counselor's responsibility is to build trust and consensus. This is accomplished in a non-blaming, honest, and supportive environment.

Case Studies: Examples of Goal Setting and Planning

Case I: Gabe

Gabe, a 38-year-old male, acquired a brain injury as a child when he fell from his bicycle and lost consciousness. Records from that time were unattainable but more recent psychological and neuropsychological evaluations were available. An extensive vocational history was also reported by Gabe.

The neuropsychological evaluation revealed deficits in recent memory, orientation, planning, and follow-through. Strong correlations were noted between these deficits and Gabe's functional daily skills. For example, Gabe stated he has a great deal of difficulty with prioritizing activities and working in unstructured environments. Gabe is unable to tell people that he has problems with an activity due to embarrassment, and at times he lacks awareness of a problem until it is called to his attention.

Gabe states he spends a great deal of time moving around in the community. He often gets lost although he can find almost any location if he follows a pre-planned route. However, it does not occur to him to plan a route until he has spent several hours on public transportation and is thoroughly frustrated.

Gabe's family lives out of state and he has few friends. He has experienced a great deal of emotional turmoil and was diagnosed as having a Schizoid Type Personality Disorder with Depression. He is therefore eligible for services of the Community Support Program (CSP). Gabe has been assigned a case manager through the CSP who helps Gabe with housing and other daily living needs. Gabe is not working at this time and receives Social Security Disability Insurance (SSDI) and Supplemental Security Insurance (SSI) benefits.

Gabe did well in school including completing a bachelor's and master's degree in Social Work. Gabe attributes this to taking a few classes at a time. He also reported that the classes were structured so expectations and time limits were clearly established. He did take some classes twice.

Transferrable skills indicate Gabe's education should help in obtaining employment in a human service field. However, Gabe had never been successful in this field. His prior jobs were unstructured and required independent decisions. The amount of paper work was overwhelming as well as confusing. Still Gabe wants to use his college degrees by working in the human service field. Gabe and the counselor reviewed his cognitive limitations, fatigue factors, lack of social awareness and insight, and past experiences. Gabe's strengths were outlined--college degrees, language skills, some work history in the field, and a strong desire to find success in his field of training.

The initial goal was for Gabe to reenter the social service field if possible. He will work with a placement specialist to find an employer who understands his strengths and limitations. Gabe agreed to begin working part-time in a lower level position that was closely supervised. He could also preserve his SSDI and SSI benefits while trying a job. Job coaching as needed was also suggested by the counselor and accepted by Gabe. This return-to-work plan was considered by Gabe as a short term goal as he wants full-time work that uses more of his skills and abilities.

A close working relationship is established with Gabe's Community Support Program (CSP) caseworker and other persons working directly with Gabe. An unofficial "team" is pulled together whenever important decisions in the planning process are needed.

Case II: Robert

Robert was involved in a house fire at the age of fifteen. He suffered asphyxiation, with lengthy coma and, among other things, legal blindness. It is hard to determine just what Robert sees as he sees better at different times of the day and in different situations. Robert describes his vision as "spotty."

Neuropsychological evaluation indicated deficits in new learning although recent memory is adequate and language is intact. Robert exhibits spatial impairment through testing and observation. He could not distinguish sandpaper form, pencil sizes, or follow more than two-step directions during a situational assessment. Robert is somewhat deceptive in his functioning as he uses his verbal skills in such a way that his deficits are not obvious in superficial circumstances.

Robert is newly married, and he and his wife are expecting a baby. He does not acknowledge the severity of his deficits and in fact spends a great deal of time and energy in trying to keep others from recognizing his problems. Robert's wife is aware of some difficulties that he encounters in daily life but does not realize the full extent of his limitations.

Robert was brought to the attention of the counselor by the local Workshop for the Blind. He had been employed for a short time and was not "catching on" to the job. The employer felt that Robert's problems had little to do with his visual impairment but were centered around his brain injury. Robert, however, had no sense of inadequate performance and did not understand the concern.

The employer, counselor, community employment specialist/job coach, and Robert met to discuss a feasible plan for job retention. Could Robert keep his job with or without modifications, could another job with the same employer be found, or was this employment situation not workable and job development needed?

A situational assessment at the work site was developed. Robert's job functions were broken down into discrete tasks. His overall job was to cut and paint pencils through the use of a series of machines. The job coach watched and recorded information as Robert performed each task. Robert was unable to move from one step to the next without prompting. He was also unable to initiate or problem solve when necessary. If the pencils started to bunch up in the machine, Robert could not remember what to do and then proceed to do it.

Upon completion of the assessment, all parties met for a staffing, including Robert's wife. Robert stated that he had done a fairly good job with only a few minor problems. However, the job coach reviewed all the areas in which Robert had difficulty. The employer felt that Robert was an unsuitable worker for this job even after several modifications were tried. It was apparent to everyone except Robert and his wife that Robert could not perform the duties required.

The employer found it very difficult to tell Robert that this particular job match was not working out well for the company or for Robert. Instead the employer told Robert that he was

laid off because of decreased orders for company products. In addition, the only other job that Robert was able to perform was already filled. In this way Robert left this employment still convinced that he had the ability to do the job but that the local economy was just a little slow.

The counselor is continuing to work with Robert on these issues. Robert's attention is being called to the tasks of this past employment and how some of his cognitive deficits interacted with his ability to perform these tasks. Where possible, concrete examples are used to help drive home the point in a facilitative manner. A detailed report from the job coach is also being used to reinforce the specifics of Robert's past performance in a very concrete manner. Robert does agree that if he has job coaching assistance from the beginning of his work experience, and a more suitable job is secured, he will have a better chance for a successful vocational outcome.

Involvement by Other People

Frequently other people are involved with an individual referred for vocational services, and such people can be very helpful to case progress. However, their involvement is best established through consensus between the consumer and counselor. For example, in most cases it is desirable to involve someone who is important to the consumer's everyday life, such as a family member or significant other. This individual may provide critical support, bridge gaps of misunderstanding between the consumer and the counselor, and serve as a powerful consumer advocate. This person may also facilitate job tenure once the consumer is back at work. However, in some cases, family dynamics interfere with this process. In such situations this person may be more helpful as a source of selective information on home, community, and historical data than being more intimately involved. He or she may also know how to contact other parties who may also be of help. Forcing this helper into the case, especially when it is against the consumer's wishes rarely works. The challenge is to develop alternative suitable roles when family dynamics inadvertently interfere with progress.

Past employers and teachers may also be useful, especially when they can assist in current job placement or goal development. The involvement of other professionals will vary according to their role and consumer needs. For example, a cognitive therapist may provide initial assessment information, suggestions for training approaches, and later, assistance in work place adaptation. At other times this person may not be needed. On the other hand, a job coach or life coach may be more critical to daily events and more continuously involved in ongoing details of the case. The job coach will focus on such things as teaching job tasks, developing supervisor and co-worker supports, establishing intervention techniques for conflict resolution, and meeting other job-related needs. The life coach supports the individual with daily living issues such as housing, money management, self-care, developing personal and community networks, and interpersonal conflict resolution. However, it is important to limit the numbers and types of people who are involved to a manageable number. Otherwise there is the risk of losing time, focus, accountability, and confidentiality by having to manage too many people. The key is to ask who are the essential people to involve in the process and when? In large part this should be decided jointly by the consumer and the counselor.

What Information Can Be Obtained From Initial Data?

Available data should make it possible to answer basic and essential questions about the person and his/her expectations. This in turn will help establish initial goals which can be further revised throughout the rehabilitation process.

Who is This Person and What Goals Does She/He Have? This may be the most important question to ask. Successful job placement and job maintenance are very personal enterprises, especially following a catastrophic episode such as brain injury. Success involves not only matching people to positions based on assessment of their vocational skills but matching people according to their personal goals, social support systems, personality, past history of accomplishment, expectations, and many other factors. Without these considerations, even a vocationally skilled individual is likely to fail in his/her job placement due to a mismatch between the job and other major life factors.

It is important to get to know the individual during the early phases of assessment and case formulation. The person may have a poor understanding of the vocational rehabilitation process and be naive about his/her expectations relative to his/her abilities. However, this is a good time to learn about the person's basic characteristics and establish a positive relationship. Probable courses that the individual will follow along the path to employment can also be surveyed. This will be of tremendous benefit throughout the course of the vocational rehabilitation.

Preliminary case information can also help the counselor begin to understand how a variety of different abilities and challenges may shape vocational goals. Some of the most common challenges or abilities involve physical, cognitive, emotional, behavioral, medical, social, financial and to some extent legal issues. As noted later, it is important to understand how such abilities and challenges affect the person's goals and expectations.

Types of Data

People who have completed a course of rehabilitation will have reports from various disciplines that can provide some of this information. Other sources of information are employers, schools, and people from the person's primary support network such as family members, other professionals, and so on.

In many cases, the available information will overlap. Rather than be a burden, this can provide opportunities to cross validate the data. Conflicting information about specific issues may indicate a need for further evaluation if the problem relates to vocational potential. Conversely, collaborating information may be sufficient to clarify an issue. Data on a specific issue over different periods of time can attest to its stability, resolution, or exacerbation.

Interpreting Information. One of the biggest mistakes made when reviewing data is to accept it "as-is" rather than interpreting the information as it currently affects vocational outcome. First, is the information dated? Hospital discharge summaries often indicate only what the person was like at that time. People change over time, and challenges of several years

ago may not be present today whereas new challenges may have appeared. Still, this data can be useful in formulating initial goal development when its limitations as well as contributions are recognized.

Second, most of this information was collected via diagnostic assessments that are typically designed to identify any impairments and disabilities, regardless of the context in which they may occur. They may tell the counselor that a person has a number of generic problems without anchoring them to the specifics of work. Thus, some identified impairments may or may not relate to a consumer's vocational goals. For example, noting that a person has a standing tolerance of only thirty minutes may be of little consequence to a desk job; likewise, problems of fine motor manual dexterity may not interfere with teaching choir. On the other hand, information about problems with attention or reading may interfere with return to school. It is therefore important not to take any data at face value but to evaluate its general usefulness relative to identifying specific needs and development of vocational goals. Also keep in mind any accommodations that can overcome limitations. Job tasks do not necessarily need to be performed in a "traditional" manner. If the counselor begins thinking creatively at the beginning of the planning process, what was previously labeled as unrealistic may in fact be a possibility.

In some cases, data may have been collected via situational assessments, that is, observing the individual's abilities within the context of a real work environment or situation. While this data may seem more useful because of its functional orientation, it is important to assess how it was collected. Simulated work environments within a hospital setting may not relate to daily work world challenges. Similarly, short-term assessment intervals may not uncover vocational sustenance or endurance. Still, such data, when properly screened, can help put together more pieces of the initial assessment puzzle.

Finally, one of the most important but most overlooked pieces of data relates to assessment of current resources. It is imperative to match a consumer's goals to available resources. Resources should include those viable not only through the vocational rehabilitation agency but through the individual's own support network. This may involve receiving dollars from insurance or personal resources, but more importantly it can involve the support of family members or significant others, community stability, and other factors that affect daily living. These resources will have to sustain any outcome long after the counselor's work is done. Hence, it is important to attempt to "rough out" a balance between a person's goals, resources, and supports, even at this early point in the case. In this manner different options can be explored to help direct the overall process, even from the start.

Is There Enough Data to Establish a Vocational Goal?

As previously noted, even when a counselor understands all of the possible limitations of this preliminary data, it may still be possible to rough out initial goals and directions with the individual. When possible, it is desirable to do so, even if additional information is required to refine the goals and process at a later date. This early momentum can foster success by building a mutual trust.

In some cases, however, there will simply not be sufficient data to establish an overall

goal. This is especially likely when the consumer has not participated in previous rehabilitation programs, is represented by extremely out-of-date data, was involved in different community service programs (e.g., mental health) that did not address critical factors following the brain injury, and so on. In such situations, it will be necessary to collect more data before setting an overall goal.

When requesting additional data, it is important to ask specific questions. Requests for "generic" information (e.g., a neuropsychological evaluation, medical evaluation, etc.) are insufficient. The request must involve particular questions related to the consumer's functioning or ability to function within a vocational situation (or relative situations that affect vocational ability/tenure/performance). Hence, a request for a "neuropsychological assessment" generally will produce a report with information on various cognitive and perceptual abilities relative to selected test norms. This information may or may not be of use in assessing specific vocational potential. It is better to request that the neuropsychologist answer specific questions about cognitive and perceptual abilities as they relate to work ability. For example, does the person have sufficient abilities in attention and concentration to do a specific job (or what alternatives)? What potential positions could a person consider given his/her speed of information processing? And so on. It is also important to ask the assessor to document and justify how he or she arrived at his/her conclusions. Similar types of questions should be asked of physicians, therapists, or any other modes of assessment that might be considered. The answers to these types of questions will help the counselor more in case development than his/her having to extrapolate from more generic professional data. As the user and payer of such assessments, the counselor and consumer have a right to obtain the specific information they require to help them formulate and implement their rehabilitation goals.

STEP II: AGREEMENT OF THE INITIAL VOCATIONAL GOAL

Once sufficient data are available, the second step in the planning process is the agreement of an initial goal. This goal may or may not be the final vocational goal of the IWRP. The initial goal will become a flexible premise to provide subsequent direction for further planning, following through, and case monitoring. Although setting the initial goal should be a serious undertaking, it is not unalterable. At this point, the rehabilitation process is fluid, and it changes as new information regarding the consumer is uncovered. The consumer's abilities and challenges, the degree to which family and social supports are congruent with vocational objectives and goals, the crystallization of interests, the availability of community resources, and the local job market opportunities all have impact on vocational planning and goals. It will take time and various information sources to address all of these issues.

Planning cannot be separated from assessment. An ongoing review of assessment information enhances the counseling process and leads to a vocational direction. It provides the counselor with a better understanding of the consumer's abilities and limitations in the planning process.

Some people who have experienced brain injury may have difficulty with coping,

reasoning, judgment, motivation, and oral and written communication. These challenges may make it difficult for them to fully participate in the planning process. However, these people are encouraged to work in cooperation with the rehabilitation counselor on all aspects of the decision making during the rehabilitation process (Armstrong, 1991).

Counseling and planning vocational goals following brain injury can often be a challenging experience due to unrealistic or uneducated expectations. Sometimes this happens when an individual has an overestimation of their abilities and underestimation of the time that it takes to reach vocational goals and objectives (McMahon & Frasier, 1988b). In working with this problem, Fraser, McMahon, and Vogenthaler (1988) suggest the following action steps. If the person is working with a psychologist or counselor on adjustment issues, it may be helpful to consult with these individuals to get a broader view of the consumer's awareness of his/her functional limitations. Second, all professionals need to understand that unrealistic expectations are often a part of the adjustment process. As such, the rehabilitation counselor's timing of any intervention should be coordinated with other people who are involved with the consumer. Third, family members' or significant others' involvement may help when supportive relationships are evident. Finally, remember that professionals have no unique wisdom and many an evaluator or counselor has been humbled by a consumer's "remarkable and unexpected" success, despite all "scientific and professional" predictions.

To reach the initial goal, the counselor and consumer may wish to follow a series of goal- setting steps. These include:

1. Review evaluation information with the individual and significant others (this could be anyone from a family member to a human services case manager). Information should be presented in a clear, concise way without the use of medical or rehabilitation jargon. Emphasis should be placed on the functional use of these evaluations.

2. Assist the person to clearly define his/her assets and challenges. Both oral and written methods may be used to enhance the consumer's comprehension. For example, while discussing strengths, the counselor may list these in a concise, easy-to-understand format both in written form and perhaps on tape if necessary. An emphasis should be placed on current skills and levels of functioning. Counseling may be required over a period of time to help the person reconcile past functioning with current levels of ability before moving on to the development of new skills. A review of transferrable skills within the consumer's repertoire may help guide the person to determine initial goals.

3. Explore the skills, training, resources and possible credentials that may be needed for the vocational goal.

4. Become aware of current labor market information for the community in which the individual lives and learn how market conditions may be likely to affect job placement and tenure.

5. Make a distinction between short-term and long-term vocational goals. A realistic short-term goal may be accepted if viewed as the first step in a series necessary to achieve a more difficult long-term vocational outcome.

6. Review the impact of cognitive, behavioral, physical, and social/emotional consequences of the individual's post-injury status and how they may affect the desired goal.

Vocational counseling sessions that are brief and goal directed may be more successful than long and drawn out marathons. This can keep the process directed and may also address some of the problems of attention, comprehension, and fatigue that may occur following brain injury. It is also important to remember that no two people or brain injuries are alike and not all people will present the same challenges. Facing the sheer number of work entry or re-entry challenges following any type of catastrophic life event can be overwhelming regardless of personal abilities or impairments. An overload of information coupled with expectations of rapid decision making will not benefit the planning process. Depending on his or her cognitive impairment, a consumer may need time and possibly assistance to sort out each step in the process. In addition, repetition and careful monitoring of the consumer's perception and understanding of information may be necessary. The counselor may assist this process by writing out information discussed and highlighting important issues. The person can then review the counseling session at a later time on his/her own or with the assistance of a family member, friend, or other helper.

What Happens When Parties Cannot Agree on a Preliminary Goal?

There are a number of strategies to consider when the counselor and consumer cannot agree on a preliminary goal. First, it is important to remember that the focus person is the consumer of this process. He or she will have to live with the results of the service after the counselor is long gone. The individual is not always the unrealistic party or the one that is interpreting data incorrectly. In many cases the success or failure of the rehabilitation plan depends upon the persons's perception that he/she has taken an active role in all planning and decision making that has been accomplished. If "expert" information is not assimilated in a cooperative manner, it will not be useful in helping to formulate attainable goals.

The counselor may want to consider the following strategies for the development of a realistic vocational goal(s). Some of these strategies can be found in Traumatic Brain Injury: Fundamentals for the Future, 1991.

1. Allow a "fair hearing" of unrealistic goals. It is, perhaps, a natural inclination to interrupt when a goal seems outside an individual's reach. The counselor should listen to the consumer's plans for re-entering the work force without immediate response. The person will be more likely to negotiate if the counselor is seen as listening.

2. Set up a hierarchy of goals (or a sequence of tasks) directed towards a long-term outcome, even if there is not immediate agreement on a terminal goal. In this way

both parties can focus on what the individual can do today and progress towards the ultimately possible rather than be limited by assumption or speculation.

3. A situational assessment at the job site to assess performance can be useful if the consumer wants to return to previous employment. It is important that some agreement be developed ahead of time on the criteria for success or failure and on how to evaluate such outcomes. The data collected at the work site should be written in behavioral terms. This information will then provide concrete feedback as to ability/inability to perform prior job duties. This strategy may also be used when an individual is interested in a new area of employment. Here, a cooperative employer is necessary in the collection of specific data.

4. Volunteer positions may be used to help a consumer become aware of his/her strengths and limitations in a "real world" setting. An extended evaluation status may be used particularly if job coaching needs to be purchased for the volunteer experience. Before arranging for volunteer placements, however, the counselor may wish to consult local, state, and federal labor laws to ensure compliance.

5. A skills assessment approach using "paper and pencil," task analysis, and comparison of consumer skills to required skills can be useful. This information may be obtained from a traditional vocational evaluation, but functional assessment protocols are usually more informative. The consumer and counselor can also try to match up the person's skills to the requirements listed in a variety of sources, e.g., Dictionary of Occupational Titles and other career information systems.

6. Informational interviewing is helpful. Prior to establishing a vocational goal or a trial job, the consumer contacts various employers. Using questions that have been previously generated by the counselor and consumer, the consumer interviews the employer or a qualified worker to learn about the job requirements. Then the consumer can match his/her skills and abilities against those required by the job. A list of skills to acquire prior to entering a particular job is developed.

7. When the individual wishes to pursue training considered unrealistic, an interim step, such as taking a course at a post-secondary school, may give objective feedback. This is conducted in extended evaluation (Status 06) as part of the information needed in determining a vocational goal.

8. Counseling or mediation strategies are useful in facilitating solutions to disagreements.

The strategies mentioned above may be modified for individuals. Be creative! Extended evaluation status can prove helpful in coming to consensus regarding feasible vocational goals.

Sometimes the counseling process used with individuals with brain injuries has several unique characteristics. Torkelson (1983) suggests the three steps of exploration/awareness, understanding/knowledge, and action/skill building:

1. Several rehabilitation goals are explored by the consumer and counselor before a final judgment is made. The counselor's awareness of how and why the goal is important to the consumer will help the counselor to identify any barriers to that goal and possible solutions to such barriers. This, in turn will enhance cooperation in developing a rehabilitation plan.

2. Information and instructions are clear and concrete. The counselor must make sure that information is understood by the consumer. The consumer needs to understand what the counselor is saying and must have a working knowledge of why this information will help them in reaching functional goals.

3. The counselor uses strategies the consumer may already be using while learning to address post-injury challenges. This may include specific techniques such as cognitive retraining, memory training, language and communication exercises, social skills exercises, adjustment training, work hardening, etc., that relate to independent living and vocational goals. These strategies are incorporated in counseling sessions where they are likely to facilitate the process.

When working with a consumer who has severe short-term memory deficits, the counselor may encourage the individual to write down the specific information he/she will need to pursue a job lead. This will help the individual to succeed in the job search as well as transfer a compensatory strategy to another critical area of life. Based on consumer success or failure with this process, the counselor can assist the person in modifying such skills and strategies as part of the ongoing counseling process. If necessary, the counselor may also refer the individual to other specialists for more intensive work in certain areas. Or, the counselor may inform other involved therapists that the individual is generalizing (or not generalizing) his/her work to vocational issues. This feedback can cause important changes in other therapists service delivery and improve the outcome for the consumer.

VOCATIONAL PLANNING AND THE IWRP

The IWRP, when properly used, reflects a complex mix of goals, objectives, inputs, expectations, and monitoring systems in a concrete and written form. In this manner, a properly developed IWRP serves as a point of reference for goals and activities in an ongoing case and thus, does not direct case outcome but defines activities leading to outcome(s).

IWRP's are subject to change, and as such, will require amendments as new goals and objectives emerge. Similarly, new intermediate objectives may be added and old ones deleted. In some cases, the overall vocational goal of the case may change, requiring a totally new IWRP.

The dynamic nature of assessment, planning, and provision of services involved in the vocational rehabilitation of persons who have a brain injury must be reflected in the IWRP. In many cases, this may seem to be a circular rather than a linear path. Holding consumers to an earlier vocational plan simply because that is what the IWRP mandates is unreasonable. The

IWRP needs to be flexible enough to respond to current case challenges. It should be used to guide the person to the next series of steps or objectives of the plan and provide for assessment and monitoring of interim results before moving on to longer term goals.

There can be many reasons why an individual's progress does not develop as expected. For example, unrealistic expectations from the consumer, his/her family, or even the counselor may reappear from time to time. Services and resources assumed at the time the initial IWRP was developed may change, or new ones may appear. Job markets and job placement sites can fluctuate with changes in the local economy. Other factors may also appear. Thus, it is difficult to incorporate all potential contingencies for all possible situations in the initially established IWRP.

Adjusting to the changes brought about by this dynamic process will require a great deal of flexibility by the counselor and the consumer. Often the greater burden of such flexibility will fall upon the counselor as the consumer may not tolerate or understand change well. Careful explanation of changes to the IWRP will be necessary. Through counseling and negotiation, the counselor and consumer will make any changes necessary as circumstances change. This requires clear communication, trust, and mutual respect. The Rehabilitation Act Amendments of 1992 require:

> ...a statement in the individual's own words describing how he or she was informed about and involved in choosing among alternative goals, objectives, services, and methods used to provide or procure such services. (RSA, 1992)

This addition to the IWRP requirements will help increase the individual's involvement in the planning process. It also becomes the means by which the consumer can monitor his/her direct input into the IWRP development. For example, the consumer and counselor can keep a running list of goals, objectives, services, vendors, and time frames discussed. When actually completing the IWRP, this list can be reviewed by the consumer and counselor to help the individual address issues of involvement and informed consent regarding various aspects of plan development. This also gives the person one more opportunity to review in a concrete format all the steps that preceded the actual IWRP. The information can also be used to refocus the individual should unrealistic goals and expectations re-emerge at a later date.

The Rehabilitation Act Amendments of 1992 offer a means for increased consumer participation. As such, the counselor will be assisted in encouraging the consumer's personal ownership of goals and objectives leading to employment. A tone of mutuality and cooperative effort will be set for decision points leading to the completion of the IWRP.

Monitoring the Process

The means by which case progress is monitored should be written into the IWRP and reviewed on an ongoing basis. Thus, as goals and objectives are identified, decisions are made and documented. If there is not enough information to make necessary decisions, the counselor and consumer will have to plan activities to obtain the necessary information and follow that plan. If there is disagreement regarding a vocational goal or objective, steps will similarly have

to be taken to resolve the disagreement. This can then aid the consumer and counselor in planning for the "next step." All of these activities should be adequately documented.

The consumer, counselor, and provider of services represent the primary parties who determine how to document and measure each goal. Once again, the consumer's input is extremely important as his or her perception of success or failure will be a driving force in any modification made to the IWRP.

Assessment results should be measurable and concrete for all parties. For instance, if the consumer is taking classes toward completion of a degree, measurements of success include the grades received and course hours completed. In another situation, measurement of placement services may be the number and responses of employers contacted each month and how each contact related to the consumer's vocational goals. At times of case review, problem areas can be identified and new criteria for successful progress can be developed.

As services are provided in accordance with the IWRP and objectives are met as indicated by the established criteria, the question of relevance may occur. Are the objectives truly leading the person toward a viable vocational goal? Is the person in a better position as a result of meeting the IWRP objectives to reach stated vocational goals? If not, a return to planning and decision making should occur. This ongoing monitoring process will help the counselor and consumer to focus on where the person is going and how the trip will be made.

The formal frequency of case assessment is identified in the IWRP and mandated by consumer progress. In this way the person has a structured time frame in which to accomplish certain activities. Again, these are only formal guidelines and case monitoring should occur on an "as needed" basis due to progress, changes in resources, or other demands appear.

Finally, monitoring of the case process should not solely be seen as a rationale for service provision by the funding source. Timely and careful review of the rehabilitation process can aid the individual to progress in obtaining the stated rehabilitation goal(s). Hence, both the counselor and the consumer can use the monitoring system as a tool in the management of the entire case.

SUMMARY

In summary, rehabilitation planning is a comprehensive and dynamic process that transcends each case. While a good deal of structured and formal planning is assumed to occur at the start of a case, in reality, effective planning is an ongoing and "real-time" process throughout the life of each person. A plan is like a road map; it helps steer people to agreed upon destinations. The first step in this process is to agree upon a destination. Destinations can change, however, for a variety of reasons. There are often many ways to get to the destination. This is where good communication, trust, and understanding come into the picture.

An IWRP, like a map, is simply a tool to be used to achieve an outcome. Its usefulness is dependent upon its accuracy and relevance to the prevailing environment. No matter how

matter how accurate it may have been in describing an earlier situation, it is of little use if conditions have changed. The goal is to use the IWRP as a tool rather than a mandate--to stay on the road as appropriate, while knowing when to establish other approaches.

The recent emphasis on consumer involvement in case process acknowledges the implicit importance of a partnership. It is a right as well as a responsibility of each person to influence, if not choose his/her own destiny. Rather than being viewed as barriers to efficient case management, these mandates are seen as important tools to effective case outcomes. The successful counselor's ability to balance diverse goals, resources, expectations, and other elements is perhaps the greatest responsibility of his/her services and the way his/her professional acumen is best evaluated.

Chapter IV

SERVICE DELIVERY

As little as ten years ago vocational rehabilitation counselors had fewer service options for persons with brain injury. In fact because of the lack of available services many individuals with brain injury never got far enough in the continuum to seek vocational rehabilitation counseling. This has changed dramatically by the advent of new medical technology that permits more and more individuals to survive severe brain injuries. In addition, positive public perceptions of persons with brain injuries and legislation such as ADA have significantly increased vocational options for persons with brain injury. This growth in the number of people who survive brain injury and legislation which promotes community integration have contributed to the dramatic increase in the number of programs and services available for these individuals. In 1980 only a handful of programs that specialized in providing services to persons with brain injury were available in the United States. In 1990, the National Head Injury Foundation (NHIF) reported that there were over 500 programs specializing in traumatic brain injury rehabilitation. More recent estimates indicate that number may have grown to over 700 (Wiley, 1993).

This dramatic increase in persons with head injuries has created a 25 billion dollar per year business. In a rush to take advantage of opportunities in the rehabilitation services industry, some rehabilitation providers (both for profit and not for profit) have resorted to unethical practices. Perhaps one of the most commonly used practices is for providers to promise family members and professionals more than they are capable of delivering (Committee on Government Operations, 1992). This issue has escalated to the point that the National Head Injury Foundation (1992) has published and endorsed a document titled Ethical Marketing and Service Delivery Practices for Health Care Providers Engaged in Head Injury Management. For this reason, it is extremely important that vocational rehabilitation counselors understand what issues are involved in assisting families in selecting programs and facilities for their loved ones.

In selecting programs and services, the vocational rehabilitation counselor should also be a wary consumer. It is important to carefully analyze each provider's strengths and limitations. This chapter will discuss issues to be considered during the selection process and will provide descriptions and examples of a variety of brain injury services and programs.

IDENTIFYING AND SELECTING APPROPRIATE SERVICES AND PROGRAMS

One of the biggest mistakes one can make when selecting a rehabilitation program is to confuse the consumer's needs with the services that a program may provide. As has been outlined in earlier chapters, it is important to have available evaluation data that identifies specific functional deficits. Many marketing representatives from brain injury service programs will attempt to sell a "canned" program that they claim has been shown to help all people with brain injury. These canned programs will contain services that a specific consumer does not need. Consequently, it is important to steer the negotiation towards only those services needed by the consumer. All agencies have limited resources to serve persons with disabilities. Therefore, it is important to carefully match the services available to the functional limitations identified in the evaluation. The focus should be on locating appropriate services for the consumer, not sending that individual to a "program."

When evaluating services and programs, it is critical to not lose sight of the desired outcome. For example, many programs and services available for persons with brain injury are not located in that person's home community. However, some programs will promise to provide transition services for the individual into the home community. These programs may have the consumer working in the program's city but cannot locate a job or provide services in the person's home community when he/she leaves. If so, they have poor long-term outcomes. It is important to ask what are the capabilities of their program beyond their facility grounds--can they provide services 200 or more miles away? In addition, it is important that the evaluation focus on what support systems are available in the consumer's home environment. Any assurances that they will transition the consumer to the home town should be documented in writing. In the past, some programs claimed to provide appropriate follow-up services that were not provided. It then became the vocational rehabilitation counselor's responsibility or the families' to continue to work with the consumer.

The process of arranging and determining the most appropriate services for a person with brain injury is complex. The combination of deficits associated with persons with brain injury can create interactive problems that can make service delivery and placement much more difficult than for persons with a single severe disability. For example, many individuals with brain injury are capable of learning how to perform vocational tasks fairly reliably and accurately. However, one of the most difficult problems for a person with brain injury is adjusting to the social environment associated with work. Consequently, a service delivery model for one individual might focus more on social adjustment than it does on actual vocational skill acquisition.

Another factor to consider is pre-injury behavior. A significant number of the persons with brain injury exhibited high risk behavior or poor social judgment pre-injury. For example, some may have abused alcohol or drugs, refused seat belts, rode motorcycles without helmets, and had other high risk behaviors. Following a brain injury, those types of behaviors continue and are further compounded by the inability to understand and recognize other potential hazards.

An equally important issue to consider, when attempting to provide appropriate services

for persons with brain injury, is a full understanding of the limitations or problems resulting from the brain injury. For example, you may have a consumer who for three weeks has gotten up, dressed, caught the bus, rode to work, returned home safely, and continued this routine daily. However, then the individual begins missing work. It is easy to speculate that this person is no longer interested in continuing to work. This assumption may be false. Something may have happened that sidetracked this individual from his/her normal routine. Persons with brain injury very often depend on structure and routine to monitor and to facilitate their behavior. Most individuals would know that the consequence of missing work could be losing his/her job. However, a person with a brain injury may not initially realize the magnitude of the consequences associated with that behavior. Because of this, individuals with brain injury are often accused of malingering or consciously deciding not to participate in programs. Be sure to analyze the situation carefully before reaching such conclusions.

There are other issues to consider besides matching the services selected with the evaluation findings. First, it is important that the counselor works diligently at aligning his or her expectations with those of the consumer, family, and other service providers. Oftentimes the best service delivery models are sabotaged because one or more of the previously mentioned parties is expecting something that is not able to be provided. Alignment of expectations is critical because providing a successful outcome for most persons with brain injury is a task that involves all participating individuals.

The consumer's willingness to accept the program and to participate in that decision is critical to the outcome achieved. The consumer's unforced involvement in the process increases the likelihood of success. Involvement includes checking available resources, discussing program content and outcomes, touring the service provider's facilities (if appropriate) including talking with staff, and making decisions regarding desired functional outcomes. A major question to ask service providers is "How are you going to involve the consumer in the process of rehabilitation?" The Commission on Accreditation of Rehabilitation Facilities (CARF) is very specific in their guidelines. Organizations are not accredited unless consumers are actively involved in the decision-making process about the rehabilitation services they will receive. This should be a major expectation of programs and one that the rehabilitation counselor should assure. If the consumer does not have a guardian, then the counselor must assume that he/she is capable of making these decisions. Family are involved only to the level at which the consumer feels comfortable. However, when the family is the legal guardian or if they have assumed the power of attorney over that individual, these agents need to be actively involved. Whatever strategies are taken in selecting a facility, aligning all the individuals involved in the process is most important.

When dealing with any service, the issue of home versus distant options needs attention. Another related issue is urban versus rural services. For many survivors, distance is even more important. Regardless of quality, a long-term service provider will do little good if it is located hundreds of miles away and provides no transitional services. But what if the consumer lives a long way from any provider? First, the consumer and counselor must determine the range of options available. Second, they must determine which option will best meet the consumer's needs while still respecting his/her unique circumstance and offer help in returning to the home community.

At times, a lack of local services will lead to the use of nonprofessional options, e.g., Circle of Friends. In other instances the decision will be to go "out of town" for services. In both, it is the counselor's job to monitor the program for the functional outcome(s) desired. Which program will assure transfer of gain in skills, behavior, or whatever are the program's goal.

Types of Programs

All of the factors outlined earlier must be considered when arranging service for the consumer. While the process of identifying and selecting the most appropriate service and program is challenging, many of the services and programs are already known by the counselor: occupational therapy, physical therapy, speech therapy, work adjustment training, job coaching, transitional employment, sheltered workshop employment, and supported employment. Other services or programs or services are unique to people with brain injury.

Neurobehavioral programs may be residential. As the name implies, these programs deal with acquiring behavioral skills or diminishing untoward behaviors. Pre-injury or new behaviors resulting from the injury are often difficult to modify without a very regimented approach. Neurobehavioral programs provide a very structured environment for consumers. Staff are generally highly skilled and have considerable experience. Usually they work as a multi-disciplinary team, with primary responsibility assigned to one member. Prior to authorizing a neurobehavioral program, the consumer (guardians) and counselor need an independent assessment. They then closely monitor the program and the individual improvement in the functional skills targeted.

Cognitive rehabilitation deals with the cognitive deficits that are the result of the brain injury. This includes but is not limited to memory, attention, problem solving, reasoning, and psychosocial skills The goal should be increased functional capacity in the area or areas being treated. The provider in this case may include any one of a number of professionals who have devoted themselves to working with the cognitive aspects of brain injury. Specific licensure does not yet exist for such providers, so the counselor needs to approach this type of program with caution and be very diligent in monitoring progress toward the desired functional outcome. As with medical outpatient programs, the provider that has experience with brain injury is probably in a better position to deliver services that will lead to the desired outcome. Be careful of cognitive programs that predominantly rely on computer-based training. Computer training of cognitive processes rarely generalizes to functional daily-life settings. In a good cognitive program, computer training is only a small part of the program. The primary focus is on real-life settings with computers used primarily as supports to other methods of skill development.

Useful services and programs (neurobehavioral, support groups, Narcotics Anonymous or Alcoholics Anonymous, work tolerance, etc) are located in a variety of settings. They may be outpatient (part- or full-time) or inpatient services attached to acute care hospitals. Others are found at rehabilitation centers, transitional living residential programs, or day treatment programs associated with a clinic or hospital and other private service providers. These programs may include a vocational component, but the service will vary from program to

program.

Counselors may already have access to vocational services or be considering vocational service for selected consumers. New vocational options have developed that give consumers more job opportunities such as supported work, job sharing, and mobile work crew positions. The difference in these job placement options is that the critical aspect for many persons with brain injuries is the cognitive and psychosocial functional deficits, not the physical or mental deficits. The key to using any of the vocational service options is the assessment and provision of appropriate service directed at needed cognitive and psychosocial skills.

Community-Based In-House Employment

The services of in-house employment by a community-based service provider is well understood by counselors. These service providers have a role to play in the vocational rehabilitation process for some individuals with brain injuries. These programs can provide the first transitional step to employment for selected individuals. For example, community-based in-house employment gives the individual the responsibility of arriving at work on time, interacting with co-workers and supervisors, and meeting production demands, without some of the risks associated with other vocational options. Program staff supervise the activities, evaluate functional skills, and manage production schedules for the work, which is usually contracted.

A community-based in-house employment program must be carefully selected for several reasons. First, many individuals with brain injury resent placement with persons with a developmental disability or a serious mental illness. They do not see how their needs are like those of persons with other disabilities. Second, the staff at some community-based programs may not have specific training regarding the rehabilitation needs of persons with brain injury. Third, too often the consumer's case is closed if improvement is not seen in a relatively short period of time. Consequently, unless all other treatment options are inappropriate, a community-based in-house placement must be carefully evaluated before it is suggested. When community-based in-house employment is considered as a transitional placement, look for the following:

1. Staff understanding, training, and ability to serve persons with brain injuries;

2. Assurances that a workable behavioral plan leading to the vocational goal is in place and followed;

3. A staff that wants the counselor to make frequent (as often as every two weeks) contacts with the staff and consumer to review progress;

4. At least monthly staffings with the consumer, counselor, and significant others; and

5. A program with a track record of helping persons with significant behavioral deficiencies make the transition to community work sites.

Community- based rehabilitation programs can provide opportunities for work adjustment

training. DeBoskey and Krollman (1990) indicate that work adjustment is designed to assist people with disabilities who need assistance to re-integrate into the community or to maintain themselves in a work environment. According to Gobble, Henry, Pfahl, and Smith (1987) work adjustment may help an individual with traumatic brain injury to:

1. Understand the impact of the injury on vocational functioning;

2. Set realistic goals;

3. Develop effective interpersonal and social skills for the work environment;

4. Develop motor skills, endurance, and stamina;

5. Develop competencies in critical vocational skills; and

6. Develop adequate competency in ... basic work abilities... [such as] maintaining attention on a repetitive job, moving flexibly from one task to another and accepting responsibility for direction or control of an activity. (p. 226)

Only after other options have been attempted should a community-based in-house placement be considered. If a community-based employment program is used, the consumer and consumer advocates (family, friends, guardians) should all understand that re-referral to vocational rehabilitation is an option if (when) improvement occurs.

EVALUATING SERVICE PROVIDERS

In most areas of the country, there is little problem finding agencies willing to make and attempt to provide services. In fact, in many urban areas several marketing representatives will extol the virtues of their particular program or service delivery model. One of the vocational rehabilitation counselor's tasks is to wade through this marketing glitz and determine which programs may meet an individual consumer's needs. The counselor should examine and identify the strengths and limitations of each service provider. As mentioned, one of the most appropriate ways to do that is to examine the programs' outcomes.

Many service providers have neglected to provide appropriate outcome data. In addition, many of the outcome studies have not been performed with a great deal of scientific rigor, and the accuracy of this data is disputable. When evaluating outcome data from particular service providers, it is important to keep a number of factors in mind:

1. The sample size should be large enough to give an accurate picture of the overall performance of the organization. The sample should represent an unbiased majority of the cases served in an appropriate time frame. However, use judgment to determine what would constitute an acceptable success rate (for severely disabled persons it may be as low as 25%). For example, a small program may serve only 30 people during the year. Success with how many of those individuals is

appropriate enough to give an accurate picture of the overall performance of the program? In addition, individuals should be chosen at random to participate in the study or matched with potential referrals on significant features.

2. The sample should not consist solely of persons who successfully complete the program. Data for those individuals who drop out for a variety of reasons is also necessary. The study should provide representative samples of characteristics such as severity of injury, chronicity of injury, and specifics regarding social or behavioral problems at program entry and leaving.

3. Be wary of studies that present significantly better results than existing published studies unless there is good justification for these outcomes.

4. Be aware of studies in which the author of a study is not identified. Many companies will list a 1-800 number at the company's headquarters rather than an author. That number often reaches the marketing department and not a researcher involved with the study. If the researcher has left the company, get the name and call him/her at his/her new job.

5. Finally, use common sense to make sure that the study is valid. For example, make sure that subject comparisons are an "apples to apples" comparison (i.e., similar coma scale scores or other common attributes).

Other indicators of quality in a program are the expertise and longevity of the staff. Ask the program representative for a copy of a listing of their professional staff and how long they have been with the organization. It may be wise to avoid organizations who have had a great deal of turnover in the last year or so. Take time to see what experience the staff has in brain injury rehabilitation.

It is important to ask how the organization is licensed or accredited. However, many states do not have specific licensing categories for brain injury programs. Consequently, these programs are licensed in categories that really aren't appropriate for the services they provide. For example, a program may provide brain injury services and be licensed as a nursing home. In the marketing presentation, their representative may suggest that they are providing the same services as an acute inpatient rehabilitation program. While this may be true, if the vocational rehabilitation counselor, family member, or consumer is disappointed in the services received there is no legal recourse. Under nursing home licensing guidelines these programs are not required to provide those services.

Accreditation is one of the most misunderstood aspects of rehabilitation provider quality. Many individuals assume that because an agency is accredited it is constantly meeting the standards laid out by accrediting agencies. It is important to note that accreditation surveyors usually spend a limited amount of time at the facility. What an accreditation really means is that during the time the surveyors were there, the organization was in compliance with the majority of the standards of the accrediting body. Many accrediting bodies award three-year accreditation. During the interim between surveys major staff turnover can occur that may

seriously undermine the program.

Accreditation does indicate that an organization has attempted to provide basic standards of care. However, the standards may change over time and so the counselor should make site visits periodically to observe the quality of services provided. In the case of CARF, the counselor should ask whether the organization received a one- or a three-year accreditation. A one-year accreditation may imply that some problem areas were identified while a three year accreditation typically indicates substantial compliance with the standards. Also, it is important to note in what specific areas the organization holds accreditation. CARF currently accredits specialized brain injury programs that include Pediatric, Medical Inpatient, and Community Integrated Programs (CARF Standards Manual, 1993). An organization can be CARF-accredited but have no specific accreditation in brain injury.

Negotiating With Service Providers

One important aspect of your relationship with service providers is the fact that vocational rehabilitation is a funding agency. It is important that expectations are established as they are with other service providers. At times vocational rehabilitation counselors have felt intimidated by rehabilitation programs and simply allowed the program to determine what services were to be provided. Remember the vocational rehabilitation counselor has a great deal of leverage in what is expected of that provider. It is important early on to have a meeting with the provider and lay out these expectations. The first expectation is that the individual will achieve a higher level of vocational success. The service provider should provide a picture of how they are going to meet the vocational rehabilitation needs of that particular person. Secondly, communicate what the expectations are in terms of functional outcomes. This includes the outcomes that the counselor and consumer have set as objectives as well as the outcomes expected from the organization.

Counselors must maintain records of the outcome of purchased services. In this case the counselor can indicate at what level of communication (within reason) that he/she expects from the organization. It should be understood that reports will be objective and demonstrate measurable progress towards the negotiated outcomes.

In initial negotiations, the vocational rehabilitation counselor should ensure that the service provider can describe what will happen to a consumer once he/she has completed the program. For example, how are they going to transfer whatever gains they have made to the person's naturally occurring environment? What kinds of follow-up services will they provide to ensure that the outcomes they achieved are durable and long lasting?

After gathering this information, it is important for the counselor to go out and visit (whenever possible) the contracting programs or service providers. The counselor should make sure on the visit that he/she has an opportunity to speak with staff and consumers who work at the facility or with consumers who have gone through the program.

Finally, any discussion of vocational rehabilitation services needs to acknowledge the role of the counselor in the process. The vocational rehabilitation counselor is often the glue that

holds the plan together. The counseling or guidance provided by the counselor is often the most valuable service provided yet is least appreciated and understood outside the vocational rehabilitation system. This counseling or guidance establishes the foundation for all the services provided to the consumer. Counseling will provide the consumer with an understanding and acceptance of his/her disability and functional limitations; this understanding will play an important role in the vocational success.

SUMMARY

The counselor must have detailed knowledge of the available resources in rehabilitation of persons with head injury. The counselor will use this information to discuss advantages and disadvantages of these options with the consumer so together they can choose the most appropriate service or program. The counselor is often actively involved not only with the consumer but also with family members. This is especially true since brain injury has such a devastating impact on a family. Finally, the counselor needs to be actively involved with service providers, providing information about needed services, and modifications to services and monitoring progress towards functional outcomes.

Chapter V

ACHIEVING EMPLOYMENT OUTCOMES

GENERAL PLACEMENT CONSIDERATIONS

No clear data exists concerning the optimum time for return to employment. The initial period after release from the hospital is often marked by discouragement, anger, frustration, and indecision about work (often for as long as a year). However, Stonnington (1986) contends that success is more probable when vocational intervention begins immediately after hospital release. Some writers suggest that this is also the time when the individual's tone and direction for work entry programs are established (Wehman & Goodall, 1990).

Others observe that post-injury vocational competence is not determined by the length of time since the injury but is more contingent on the competence and motivation of the individual or his/her capacity to develop these traits (Wehman, Kreutzer, Wood, Morton & Sherron, 1988). Wehman and Kreutzer (1990) suggest screening to determine motivation, mobility, financial situation, salary requirements, and vocational interests.

Still other professionals (Fugatano, 1988) have observed that placement will have a more positive outcome if the individual does not return to employment immediately. They suggest waiting until sufficient time has passed for the working out of frustrations and unrealistic expectations to occur--a process which typically takes twelve months post-injury. Parente, Stapleton and Wheatley (1991) suggest that this time may be insufficient and feel that the "TBI survivor's goals (vocational) change markedly over the first 2 years of recovery" (p.40). It is therefore questionable for individuals to identify placement or vocational aspirations during this psychosocial, physical, and cognitive recovery period.

It is generally accepted that vocational rehabilitation should begin as soon as an adult with a severe physical disability is medically stable. However, in the case of head trauma, the jury is still out on this point.

The economic consequences of returning to work is discussed with the consumer before placement occurs. Although this information will have surfaced during assessment, it is at the point of placement that returning to work becomes a financial reality. Individuals are often unaware of current Social Security laws regarding retention of benefits while working. The individual should also know how other benefits are affected by earning money (e.g., SSI, Workers' Compensation). It is advisable, however, to suggest that the individual seek legal counsel regarding the implications that return to work may have on future insurance settlements if any unsettled lawsuits are involved.

The issue of disclosure of disability is discussed with both the consumer and other people involved in job placement. Everyone needs a clear understanding of laws regarding disclosure. It is particularly important to have knowledge of provisions in the Americans with Disabilities

Act (ADA) regarding what and when employers can ask about disabilities or medical conditions. In addition, the counselor must consider the issues of job safety, confidentiality, and the advantages and disadvantages of disclosing information about the disability. Counselors must, for example, not allow placement of a person with a seizure disorder in a situation where seizures or the possibility of their occurrence would jeopardize the safety of a person with a brain injury or co-workers.

The consumer, job site personnel, employer, family, or other support systems should be prepared for participation in the assessment. The rehabilitation team should also be involved. Data obtained from the job analysis and candidate/position assessment provides information for pre-placement preparation of the consumer, job site, and employer.

Prior to placement, several things need to be checked. These include the consumer's living situation: Is it stable? Will the consumer have to move? Is the consumer having difficulty with roommates (family members, neighbors)? Is it a clean and safe environment? Does the individual have the social support necessary to maintain employment? Can the individual maintain himself/herself in the community? In short, have the psychosocial problems (if any) identified during the assessment process been effectively addressed? These factors often contribute favorably or unfavorably upon job placement results. In fact, they are sometimes more important than actual job skills.

The Consumer

Consumer preparation includes addressing any needs that will improve performance. Compensatory strategies such as memory aids, written schedules, written instructions, or assistive devices for consumer use should be provided. Consultation with an occupational therapist or technology specialist may help pre-preparation activities as well as on the job site. The counselor should arrange for the individual to visit the work site and meet the employer and the other employees. A review of the job description, work routine, and other important points related to the job can prevent surprises on the first day at the work site. A trial run to test transportation arrangements may also prevent problems later.

Consumer responsibilities should be clearly defined. A written contract outlining worker and employer responsibilities is often useful. The length of the probationary period is important to discuss and reasons for potential termination need to be specified. Questions to be asked include: What are the procedures for sick leave approval. time off/vacation time, or being late? What happens when a change in supervision occurs?

The Job Site

Accommodations may include acquiring or modifying equipment or devices, restructuring job tasks, making facilities accessible, adjusting work schedules, and modifying the work site. The use of compensatory strategies specific to work tasks or work area such as environmental modification (work in an area free of major distractions if needed), checklists, written instructions, diagrams, color coding, or technology devices are considered.

Consider the cognitive and behavioral demands of the job. If necessary can these demands be modified, accommodated, or deleted? What are the social demands on the job, during breaks and lunch, and before or after work? Can the individual work in that environment? Would a coach help? Can one of the other workers help the person maintain appropriate social behavior?

The Employer

Prepare the employer for the assessment. Supervisor and co-workers involved in providing training, evaluation, or support during the probationary period are identified and instructed in the accommodations this individual needs in order to become assimilated. Employer and co-worker education/training should be undertaken. Employer training will make it "possible to avoid misinterpretations that are likely to occur in the absence of an understanding of head injury or of the individual's deficits. [Additionally,] ...problem solving between rehabilitation staff and placement site personnel can occur in advance of anticipated problems" (Wachter, Fawber, & Scott, 1987, p. 281). A method of employer and co-worker input should also be provided.

One method of input that has worked well involves the use of a co-worker as a mentor. In this method, the co-worker is trained to coach the consumer and receive payment for providing this service. He/she can also help the consumer fit in socially and often become a friend.

Support Systems

Family or other support systems need to be prepared for any involvement in the rehabilitation process. One way to determine what support systems may be required is to pose hypothetical questions to the supporters. For example, what level of family support is necessary to insure that the injured member gets to work on time? If the family is to provide transportation, can they meet the work schedule on a regular and continuous basis, even rotating shifts? How will they assure a secondary transportation system when their car is needed for other duties? Will the family provide all needed support; if not, what are the other options? Is the family supportive of the job selection, and will they provide encouragement to the individual? The anticipated level of family participation, support and encouragement must be clearly defined.

When appropriate, individuals referred for placement services should obtain current physical and medical evaluations. The physician's evaluation should indicate that the individual is medically approved for employment and state the type of work schedule that is physically tolerable for the person (part-time as opposed to full-time, physical performance constraints, seizures, etc.). Medications, including side effects, are listed along with notations of dose and frequency.

Behavioral issues and interpersonal or emotional difficulties are considered major barriers to stable employment and job retention for individuals with acquired brain injury (Hendryx, 1989; Wehman, Kreutzer, Stonnington et al., 1988). Therefore, information concerning the

individual's history of psychiatric or emotional problems should be reviewed before placement begins. Such information may be gleaned from medical records, family members, previous employers, and other professionals who have worked with the individual. Problems that may appear severe do not necessarily eliminate the individual from placement options if therapy and medication can stabilize the situation. Aggressive or inappropriate behaviors can often be managed using behavioral techniques, but they should receive serious consideration before selecting a placement option and location.

COMPENSATORY STRATEGIES

A compensatory strategy may consist of simple or sophisticated aids, techniques, devices, or environmental modifications that will enable a person with a brain injury to improve or maintain functional capacities or to compensate for functional limitations. These strategies or aids can be identified, selected, or recommended by counselors and persons with brain injuries; occupational, physical, and speech therapists; rehabilitation and environmental engineers; physicians; job coaches; and employers. These strategies or aids will enable a person to get to a job, do the job, and keep the job.

Simple strategies to aid memory may involve use of a notebook, checklists, or a digital watch with multiple alarms. Signs, color coding, or a custom designed work station can help with work organization, consistency, and speed. More complicated technology such as computers, cuing systems and devices, voice and communication devices, or other aids offer assistance with memory, math calculation, and language. For example, a Neuropage device can be programmed to remind a person to punch the time clock or take medication at a specified time. If technology is indicated, remember the "golden rule" which states that simple is best; the simplest strategy has the greatest probability of use and support. This observation holds for both home and work environment. For example, if the individual has a weakness in one hand, a simple quick release vice could be used as a holder. Such a holder is far superior than a complex, one-of-a-kind prosthesis or orthotic.

Strategies such as job or schedule restructuring may be all the modification necessary for the individual. Fatigue may interfere with the rate and accuracy of afternoon production. Scheduling an extra break by reducing the lunch hour may help diminish the problems. Restructuring of a job combined with assistive devices or modifications may bring an individual to production levels that are acceptable to an employer.

The individual with a brain injury must be involved in the evaluation, selection, and implementation of compensatory strategies in order for them to be successful. No matter how well a counselor thinks an aid or modification works, it will be ineffective if the individual with the brain injury is not interested or motivated to use the aid.

Support from supervisors, co-workers, and employers is also essential to facilitate the successful implementation of these interventions. Education for and clear communication with these individuals are essential.

PLACEMENT OPTIONS

Option 1: Return to Previous Employer--Same Position

Vocational status and financial status are clearly linked to self-esteem and are considered two of the most important outcome variables in research on head injury.(Wehman, Kreutzer, Wood, Morton & Sherron, 1988). Return to one's previous vocation and/or same pre-injury employer is a situation that would greatly assist in regaining one's previous financial and personal status. It is often considered the optimum placement choice. This option assumes that pre-injury employment was optimal or on a suitable career path. If previous work skills are intact, this placement may require advocacy (to enhance skill acquisition and maintain performance standards, including orientation, communication, and counseling) and on-site assistance (work structuring) but not training (Kreutzer, Wehman, Morton & Stonnington, 1988).

Benefits of Return to Same Employer. There are many reasons, in addition to the promotion of self-esteem, why return to a previous employment situation is a preferred placement. An individual's pre-injury vocational competence, work history, and advancement interests are considered critical data used for vocational evaluation and placement (Wehman & Goodall, 1990). If these factors are re-established in a setting identical to that of one's pre-injury status, success would appear predictable.

Another predictor of successful employment is employer attitude (Blair & Spellacy, 1989). If a positive employer-employee relationship existed prior to injury, chances are that this situation may be re-established. On the other hand, the employer may have difficulty if the worker "is not the same person he/she was before." Unfortunately, it is often difficult for employers to relate to individuals with disabilities when the conditions are not visually apparent. Studies have found that employers prefer to hire individuals with bodily impairments as opposed to those with mental or sensory disorders (English, 1971; Hartlage & Taraba, 1971). Obviously, this information has implications for the individual with an acquired brain injury.

Employers as well as family members and friends find it difficult to understand a cognitive deficit. They find even greater difficulty understanding interpersonal problems that may be associated with this deficit as the individual visually appears the same as he/she was before injury. To promote understanding of the nature of an acquired brain injury, an employer should be educated as to the common behavioral sequelae of an acquired brain injury on the person being returned to work: lack of initiative, distractibility, memory problems, personality changes, fatigue, and decreased motor control (Blair & Spellacy, 1989). This education should include an explanation of interventions used to compensate for these deficiencies.

A negative counterpart of a return to a former job situation occurs when the individual does not have the residual skills to return to the same level position after his/her injury. This situation produces issues pertaining to disability acceptance, generates frustration, and needs to be dealt with before re-placement (Kreutzer, Wehman, Morton, & Stonnington, 1988).

Option 2: Return to Previous Employer--Different Position

Similar to Option 1, this placement offers the potential for the security of familiar surroundings, employer routine, and co-workers. This option is an appropriate alternative if modifications and support models are not sufficient to bring the individual to a competitive level in a former job situation.

Difficulty with this placement occurs when the individual is unwilling to accept a position that is viewed as below his/her previous position and abilities. In such cases it is essential to provide the individual with a realistic picture of his/her current abilities as compared to pre-injury abilities. A pictorial "pie" (Bull, 1989) is often helpful in providing visual information for individuals who are having trouble comprehending their inability to perform successfully at a post-injury job (see Figure V-1). The pre-injury "pie" is divided proportionately (noting relative strengths and weaknesses before injury) into five areas: information processing, interpersonal skills, memory and learning, motor speed and skill, and problem solving and reasoning. A second "pie" pictorially represents the same areas of skill but in proportion to the residual nature of the skills after injury is also presented. Finally, the individual is shown a third pie which proportionately represents abilities needed for the job in question. This pictorial presentation is conducted in group sessions led by a psychologist and a vocational counselor.

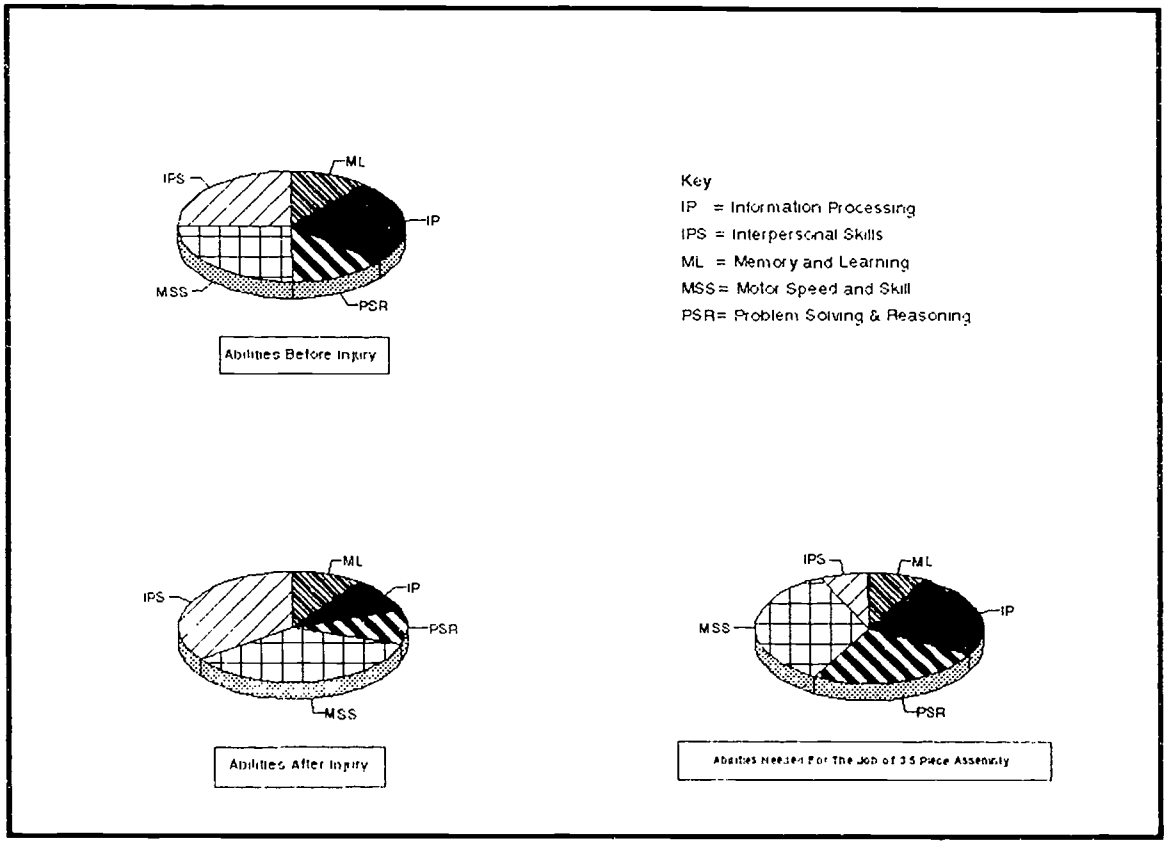

Figure V-1. Pictorial "Pies" of Abilities

Individuals in the group are guided through the process of realizing their current strengths and weaknesses in comparison to their former functioning. This process should always be conducted in as positive a manner as is possible by organizing strengths and weakness in relation to new career requirements and possibilities. The illustration in Figure V-1 can be a valuable tool to use when conversing with employers. Often they are unaware of how an individual's capabilities and limitations relate to anticipated work demands.

The first circle represents the individual's strengths and weaknesses among the five areas before injury. This individual was probably an outgoing, friendly person who was skilled in manual activities. There were enough skills present in the other three areas to live independently, pay bills, and have some social/leisure activities. There was average skill in the area of memory and a good eye for detail.

After injury (circle 2), the ability to use memory for a job, use information from the environment quickly and accurately, draw conclusions from information, and act on information are all severely diminished. The areas on the "pie" also show relative strengths. Interpersonal skills and motor skills did not improve but they are better in comparison to other declining skills. The goal for this individual is to structure new learning so that it is remembered. New information presentation should be slow and structured.

Circle 3 represents skills needed for a 3-5 piece assembly task. Interpersonal skills are not necessary to complete this type of job. Good motor skills accompanied by stamina and persistence, however, are required. Information processing, management of details, and self monitoring for accuracy are relatively important. Problem solving and reasoning are routine with this type of job but are definitely needed to keep working, reject flawed parts, and decide what to do when materials aren't available. A person with poor memory will probably be successful at this task with coaching because there are only 3-5 steps in the task (Bull, 1989).

Option 3: Same Vocation--Different Employer

The same vocation--different employer placement option allows for the familiarity of job skill repertoire but introduces challenges that surface from a different setting which may cause work related problems. An ecological assessment that deals with the physical, social and organizational aspects of the work site can provide information that may have an impact on work performance. Emphasis should also be placed on required interpersonal skills and the establishment of natural supports to reinforce and to monitor social interactions. Employer and co-worker education is necessary to prepare both parties for this work environment.

Option 4: New Vocation--New Employer

Individual With Prior Work Experience. In some instances, physical injuries, also occurring at the time of the acquired brain injury, prevent the individual from returning to a former occupation requiring specific physical activity. Placement for this individual will require assessment of residual skills and exploration of possible vocational avenues that would allow for the transference of these skills. For example, a former mechanic may have all of the cognitive abilities to continue competently in his field but does not have the agility or strength required

to physically perform required job tasks. A service writer, insurance adjuster, or parts counter person requires knowledge similar to that of a mechanic but does not need the physical agility to competently perform as a mechanic. The injured mechanic may be a good candidate for these positions as his mechanical skills would blend well with these job requirements.

In some situations, the primary issue relevant to return to productive work is that of accessing cognitive information. Since the mechanic can no longer utilize his talent in a physical sense, an alternate means of access may be a computer. If he can learn to use a computer, he can be retrained to assess the possible cost of body work and other auto repairs.

As a positive part of assessment, residual skills are noted and vocational development planned around these abilities. If the individual does not wish to return to a vocation related to former skills, other vocational options are pursued. Personal qualities (ability to work well with others, mathematical abilities, cognitive levels, previous academic records, capabilities, etc.) are assessed and vocations pursued which correlate to the individual's abilities.

The family, with a wealth of assessment information, is often overlooked during the placement process. In all placement options, with the consumer's consent, the family should be consulted and included in the formulation of vocational and placement plans. Family support is a significant indicator of vocational success. Consequently, it is imperative that a counselor evaluate the family unit and its interactions to determine whether the family is an asset or detriment to the individual's future job success. In a positive situation, the family may assist in transportation, completion of applications, cheerleading during job seeking, and encouraging the acceptance of suitable positions.

In some cases, the family has a negative effect and may sabotage successful placements. In these cases, it is beneficial for the counselor to realize the possibility of such dynamics and plan interventions to minimize negative effects (Kreutzer, Wehman, Morton, & Stonnington, 1988). In some instances, part of the plan may include provisions for independent living or some other living arrangement. However, such a move would require the consumer's understanding and acceptance.

Individual Without Prior Work Experience. A person who acquired an injury at an early age or was a full-time student at the time of injury may have limited or no previous work experience to bring to the placement process. For these individuals, it is beneficial to develop a career track which uses intermediate goals to determine appropriateness of career choice rather than providing just a series of jobs (Corthell, 1990).

Job site evaluation is also a crucial component of the placement process. In this evaluation, the counselor should consider vocational, social, and related skills required for job success. In addition, physical and social environments and the expectations and attitudes of co-workers and supervisors must be carefully weighed (Hanley-Maxwell & Bordieri, 1989).

People without significant work experience will need training in job expectations. For example, they may not realize that tardiness is rarely tolerated in industry, they may lack knowledge of how to pace work effort, or they may not know how to take directions from a

supervisor. In short, they will need training in job keeping skills.

Summary

Placement and follow-along services should contain the following elements similar to the Pathways Vocational Reentry Model (developed in part by a project supported by the U.S. Office of Special Education and Rehabilitation Services) discussed by Wehman and Kreutzer (1990):

1. Screening of potential program consumers to determine motivation, issues of mobility, financial disincentives, salary requirements, and vocational interests;

2. Job development and analysis to match consumers with specific jobs (or potential careers);

3. Travel training or access to modes of transportation;

4. On-the-job training using compensatory strategies developed by members of the rehabilitation team (job coach, job developer, neuropsychologist, occupational therapist, physical therapist, rehabilitation nurse, rehabilitation counselor, family, and consumer);

5. Interventions on the job site to provide behavior management, job-site modification, and personal and work adjustment; and

6. Advocacy services to educate peers and management.

VOCATIONAL SUPPORTS

Supported Employment Option

Job coaching and supported employment are usually designated for individuals with severe disabilities. Originally, job coaches were provided for a short time in situations where consumers needed assistance to become proficient in a job. For some individuals, however, it was found that long-term support was necessary to maintain the individual in employment. In other cases, the follow-along services (weekly contact on the job for example) were necessary to guarantee job tenure.

The supported employment approach is an excellent choice for educating the consumer, employer, and co-workers concerning the benefits and use of assistive technology and environmental engineering. Employers participating in supported employment services are made aware of how their human resource needs will be met through the use of this model. They should also be aware of the potentials and limitations of the employee with a traumatic injury (within the regulatory requirements at 34 CFR 361.49 which safeguard the confidentiality of all personal information concerning individuals served by the state vocational rehabilitation agency)

and the nature of available assistance and support on the job (Tooman, Revell, & Melia, 1988).

Additional Models of Support

In addition to supported employment there are alternative, less intensive, models of job support which may ensure the success of a job placement. True integration does involve the "direct assimilation of individuals with disabilities directly into the work force without any intervention from human service professionals" (Nisbet & Hagner, 1988, p. 263). This strict interpretation requires that the employer provide services that may include job redesign, accommodations, and adaptations (Nisbet & Hagner, 1988). Although willing to provide such services, it is very possible that the employer is unaware of how to put such supports in place. Consultation with the employer may allow for placement of alternative support models.

No one model of providing on-the-job support is appropriate for every consumer's needs. However, the following options may provide beneficial support: mentor, training consultant, job sharing, and attendant care.

The *mentor option* (Shafer, 1986) is designed to include co-workers in the maintenance of employment for an individual with a disability. In this model, a vocational agency will provide the initial re-entry support and a co-worker will assume the coach's role when the targeted individual reaches a certain level of job proficiency. The co-worker is usually reimbursed for his/her effort. This model is designed to provide support at periodic intervals and is not used for individuals who require acute or intensive service.

The mentor is also used to introduce social situations by promoting re-entrance into the formal interactions which occur in any job situation. According to Maynard (1986) and Taslimi (1980), establishment and preservation of social relationships are very important components of job satisfaction. These social bonds will tend to facilitate natural job supports, also considered extremely important in assimilating individuals with disabilities into competitive employment.

The *training consultant option* is similar to the mentor option; it involves support of co-workers. In this more intensive support system, one or more co-workers assume responsibility for training and follow-up support including ongoing supervision. Co-workers are trained by professionals who instruct them in methods suitable for on the job interventions for individuals with head injury. Gradually the professional consultant fades from the placement and competent co-workers assume this responsibility. There is often an agreement between the employer and the vocational service agency with a stipend allotted for payment for the principle co-worker involved.

Job position sharing is a creative option that has several implications. This option provides for reduced work requirements which may facilitate job success for individuals with head injury. Fatigue may cause failure in even simple tasks and lead to the assumption that higher level tasks are unattainable. One solution to this problem is for the company to hire two individuals for one job. A nondisabled individual is usually hired at 75% salary level to assist an individual with a disability who is hired at 25% salary level. Exact levels of salary are determined under Wage and Hour Law standards and paid on the basis of productivity. The

vocational agency often contributes to the expense of this model with a designated stipend for the job sharer. A co-worker may also be recruited for this position if training responsibilities would not interfere with the co-worker's established job duties.

The *attendant option* is usually targeted for individuals with severe physical disabilities and provides medical and personal care needs. The model is typically funded by the individual with a disability and not by a vocational agency. An attendant may also provide vocational assistance, and payment for this service may then come from a vocational agency. Payment can also be deducted from the individual's earnings, and SSI benefits are not affected by income.

JOB RETENTION

Parente, Stapleton and Wheatley (1991) noted an interesting phenomenon that occurred over a five-ear study of job coaching with individuals having traumatic brain injury. Many of these individuals who were successfully placed in competitive settings returned to the rehabilitation system for three reasons: loss of position, layoff from a position, or quitting a position. Since these individuals received support from the rehabilitation system in securing jobs, or returning to former jobs, they automatically returned to the system to once again begin the "loop." This return loop system dramatically complicates the success of long-term employment and appears to result from three job-related circumstances: (a) upward mobility, (b) change of job duties, and (c) loss of support.

Upward Mobility

In some instances, an individual may return to a previous position with or without assistance, functioning at a level that is satisfactory to the employer. With this initial success, it may be assumed that the individual is capable of accepting increased responsibilities or even be in a position for a promotion. The individual may accept the new position or new responsibility within a job not realizing that new skills, adaptations, and strategies are necessary. Stress and failure may result from the new position as the individual's capacity for cognitive flexibility, new learning, and adaptive skills are now limited (Parente, Stapleton & Wheatley, 1991). It is often at this point that an individual becomes severely stressed and without immediate intervention (such as job-coaching) may lose the job placement.

Change of Job Duties

"Limited flexibility and the inability to function without a structured, unchanging environment" (Parente, Stapleton, & Wheatley, 1991, p. 43) also cause problems when job duties are modified. Lack of flexibility puts an individual at risk for job loss unless immediate intervention and support are available.

The nature of competitive employment produces many situations that induce stress for individuals with head injury. Examples of changes that may induce stress include the fact that: supervisors rotate, supportive co-workers move to new positions or are terminated, and tasks and products are altered to reflect new production requirements. Inability to adjust to change

without intervention puts the individual at risk for termination.

Loss of Support System

Typically, individuals with acquired brain injury have received intensive services in post-acute care facilities before transferring to employment support services. In many cases, this type of intensive support has lasted for periods exceeding one to two years. Although consumers with head injuries often say that they resent the "control" others appear to have on their lives, they often become accustomed to it.

Support groups are available for the individual outside the work environment and independent of the rehabilitation agency. However, many individuals with acquired brain injury feel that support groups dealing with issues of adjustment and recovery are no longer appropriate for their needs. Groups most appropriate for the individual returning to work should focus on assertiveness, coping strategies for memory problems, role-playing for social situations, people skills, dating, and life organization (Parente, Stapleton, & Wheatley, 1991). Some consumers are not involved in any group activity appropriate to their needs. For these individuals, successful job placement and subsequent case closure may appear as a loss of a support system rather than a successful rehabilitation.

Possible Solutions for the Recidivism

Parente, Stapleton, and Wheatley (1991) offer possible solutions to this identified phenomenon. The first suggestion is that job-related interventions be addressed by a team of professionals that allows for flexibility and creative planning. The rehabilitation team should include the job coach and members of the treatment team involved in pre-placement therapy. This team should meet regularly to discuss possible interventions and coping strategies for situations where job specifications vary.

Job coaches should receive training that enables them to manage crises on the job, effectively communicate job-related needs to the rehabilitation team, and quickly implement team proposed solutions. The authors suggest that job prerequisites focus more on the coaches' flexibility and problem-solving skills rather than their educational background.

Finally, the authors suggest connecting the individual with a support group that provides a balance between participant interaction and topic presentations. A support group geared specifically toward the employed individual will automatically lend itself to discussion of issues that are bound to surface in the work place. Early awareness of potential problems may make transitional periods less stressful.

The strategies described have shown success in facilitating return to work. However, no single one can guarantee a successful job placement. Researchers emphasize that there is no singular approach that is beneficial for all persons with head injuries. Unique treatment and creative, appropriate placements, however, are vital in all successful employment outcomes.

EMPLOYER TRAINING

Employers who are positive about working with individuals with acquired brain injury require training. The training should focus on the nature and needs of these employers and the particular problems of their new employees. The majority of individuals with head trauma injury do not have visible signs of disability, and their particular disability is "unknown." Therefore, it is imperative that employers and co-workers understand and be aware of possible behaviors that may interfere with success on the job.

In many cases, the consumer is accompanied to the job site with a trainer or job coach who is responsible for the initial job instruction and acclimation. To facilitate a successful phase-out, the placement professional (or job coach) should provide training for employers and co-workers. With the consumer's written permission the professional may furnish training on (a) the disability, (b) intervention techniques used at the job site (and how to implement these techniques), (c) medical implications that may accompany the individual's performance, (d) social problems and possible methods to minimize stressful situations, and (e) instructions regarding contact of rehabilitation team members should problems arise during the phasing-out and follow-along sequence. In most situations, employers are willing to work with consumers and professionals if they are assured that help and advice is readily available if needed.

When the phenomena of acquired brain injury is described to employers or potential employers, emphasis is placed on describing methods of teaching and learning that produce success with the new worker (i.e., learning styles: visual, verbal, repetitions, etc.). Problem areas need to be discussed in terms of the disability and accompanied with descriptions of methods for dealing with these areas. If the worker is in a job coaching situation, the employer must be reassured that the service is ongoing. The employer needs to be assured that help is "just a phone call away." If this assurance is given, the agency must have the resources to respond within one working day.

The 5-Point System In Employer Training

The Employment Training Specialist Series (Bull, 1989) offers a systematic, 5-Point System to describe traumatic brain injury to employers. This system describes information shared with employers concerning the worker/job fit in relation to the individual's skill and particular job.

Bull's 5-Point System describes the individual in terms of the following domains: (a) motor speed & stamina, (b) information processing, (c) learning and memory, (d) reasoning flexibility, and (e) interpersonal skills. These domains correspond to the graphs used with the consumers to describe their changed selves in relation to a job. (See previous section on Option 2: Return to Previous Employer--Different Position.)

Motor speed and stamina considers work positions, dexterity, and endurance. The discussion of this area gives employers information concerning the consumer's specific motor problems and adaptations or interventions used to modify the results of this particular disability.

Safety concerns relating to balance, hemiparesis, ataxia, and general slowness are addressed if appropriate.

Information processing deals with memory, the accuracy and speed of recalling, and use of information in decision making processes. Prosthetic strategies such as lists or tape recorded information may be used as interventions. It is often useful to demonstrate modifications of this nature for the employer so that he/she can actually see the modification in place and functioning. It is also a good idea to include some of these types of modifications during initial interviews with the employer if there is a question as to how the individual will complete a task.

Learning and memory deals with the ability to learn new information and the speed of this acquisition.

> When talking to an employer about learning and memory, it is important to describe rate (retention) and method (i.e., number of repetitions before the information is retained) of learning. If the person is prone to confabulation, be sure the employer knows the difference between confabulation, poor memory, and malicious lying. (Bull, p. 52)

Reasoning flexibility is involved with the ability to adapt to new situations, deal with problems constructively, and exercise appropriate judgment in the work environment. This skill is not connected to speed but rather with the capability of producing alternatives for different or difficult situations. The employer needs to know if the new employee is capable of transferring new information gleaned in one situation to other similar or to dissimilar situations. Understanding concrete thinking will help employers and peers give specific instructions and messages so they are understood and retained.

Interpersonal skills typically cause the most difficulty for individuals with head trauma. Included are such problems as the inability to communicate effectively, maintain positive relations with others, and interpret non-verbal cues appropriately. Employers should understand that interpersonal relations are problems for many employees with acquired brain injury. Many persons with acquired brain injury will be plagued by increased emotional lability (rapid mood swings), stereotypic responses when threatened (anger), delayed responses, slow or improper processing of verbal cues (tone of voice, humor/sarcasm, anger, sexuality), egocentricity, and slow or incorrect processing of social cues (conversation endings, understanding of other's emotions). Once employers and co-workers are alerted to and understand some of the reasons for inappropriate behavior it may be easier to accept unexpected or inappropriate comments, actions, or release of temper.

CASE CLOSURE

Job placement followed by case closure is the culmination of the vocational rehabilitation process. Upon the consumer's successfully completing an Individualized Written Rehabilitation Plan (IWRP) and maintaining successful employment for 60 days, services may be terminated. This traditional approach to the vocational rehabilitation case closure process sufficiently meets

the needs of many disabled individuals. However, there is growing evidence that a different approach must be taken for people with acquired brain injury if they are to remain successfully rehabilitated.

What is Success?

Success for persons with acquired brain injury may be the attainment of transitional employment that allows for a continuation of opportunities for increased self-awareness. It may mean that case closure is a temporary solution that the individual has determined is most appropriate at a particular time. It may involve the recognition that the individual will return to the vocational rehabilitation counselor at a later time for additional assistance when he/she has reached a new level of accomplishment, adjustment, and self-awareness. Success may also involve a recognition by all involved that successful vocational rehabilitation after head injury is a continuous process that may occur over the working lifetime of the individual.

Time-limited vocational rehabilitation services do not effectively address many of the complex, long-term and changing needs of the individual with head injury or the long-term psychosocial needs that may occur months or years after injury (West, Kregel, & Wehman, 1991). Fawber and Wachter (1987) state that "Placement can not be a final, non-supported step for this population. Specialized treatment must be made available to the Traumatically Brain Injured throughout the entire rehabilitation process to include long term follow along services after placement" (p. 29).

There is increasing evidence of the necessity for long-term continuous support. New methods to address these needs must be developed if people with acquired brain injury are to remain in the labor force (West, Kregel, & Wehman ,1991). Although vocational rehabilitation services are time-limited, case closure should not be viewed as a point for termination of services. Plans should be made to address long-term issues that affect job retention.

Planning for Case Closure

Consumers, family and employer needs must be addressed when developing plans for case closure. Planning for case closure is as detailed and thorough as planning for the evaluation, assessment, and service delivery phases of a consumer's vocational rehabilitation program. The goal of the closure plan is the attainment of stable employment and the placement of supports necessary to enable the worker to maintain that employment. The closure plan should address long term needs based on knowledge of the person, family, and community gained through the assessment and evaluation, planning, and service delivery phases of the rehabilitation process. The counselor should plan for multiple employment experiences, follow-up/follow-along services and long-term support.

Plan Follow-up/Follow-Along

The importance of placement follow-up in the maintenance of employment for people with acquired brain injury is well documented. Krollman and DeBoskey (1990) state:

> Current thinking in the rehabilitation profession is that after a client has obtained a job, a comprehensive, long-term phase begins that is of critical importance in insuring that the employment experience is satisfying to both the client and the employer. This follow-up phase is critical for persons with head injuries. (p. 219)

Counselors should use all mechanisms available both through the vocational rehabilitation system and outside the system to provide and ensure necessary and appropriate follow-up, follow-along, and intervention as needed.

Post-Employment Services. It is anticipated that the majority of individuals with acquired brain injury will need services available through the vocational rehabilitation system Post-Employment Services status. Use of this status requires the counselor to address anticipated needs at the time of closure using the Individualized Written Rehabilitation Plan. Maximum use of this option is recommended.

Natural Supports. The use of natural supports as an important option in the success of a rehabilitation program is acknowledged in the 1992 Amendments to the Rehabilitation Act. This approach utilizes the support that is naturally available in the work environment. Fraser (1991) defines natural supports as including forms of job modification, including co-worker assistance, using the employer or supervisor as training mentor, and using a community training consultant. Funding for this type of support may be provided through the Medicaid system, Social Security Administration, Plan for Achieving Self-Support (PASS), and Impairment Related Work Expenses program (IRWE). Funding through vocational rehabilitation is used during the on-the-job training and initial placement period to establish these natural supports. The PASS and IRWE could be used to provide funding for extension of the supports. The counselor is urged to explore the creative use of natural supports and funding for their use because they provide additional opportunities to use existing mechanisms and systems.

Post-Placement Follow-Up. The Texas Rehabilitation Commission Rehabilitation Services Manual (1985) states "The purpose of follow-up is to insure client adjustment to employment by means of periodic counselor-initiated contact with the client, employer, and/or others, and the provision of counseling and guidance or consultation if needed" (p.1).

The counselor should plan for follow-up that includes regular contact with the employer, worker, family, and other supports. The follow-up contacts are counselor initiated and are provided on a routine basis.

Post-placement contact provides an opportunity for the employer to bring up problems or identify additional needs before a crisis occurs. It gives the counselor a chance to offer support to the employer, resolve problems before they get out of hand, and implement any intervention that may be needed to maintain employment.

Regular follow-up with the consumer provides an opportunity to discuss any problems or concerns about the job or other matters that may affect job performance and to maintain a relationship with the counselor. Early identification of potential problems provides the counselor

the opportunity to initiate intervention strategies and possibly prevent loss of employment.

Through regular follow-up with the family and other supports, the counselor can identify potential problems. Early intervention and problem resolution can prevent break down of support or can identify the need for development of new supports to prevent loss of employment.

Re-Opening a Case. Regular follow-up, post-employment services, and a well developed support system will enhance the probability that the person with an acquired brain injury will maintain employment. However, it is recognized that changes will occur over time and that all future needs cannot be anticipated and planned. When significant changes occur that cannot be adequately addressed with post-placement follow-up or post-employment services, it may be necessary for the counselor to re-open the case. The availability of this option and an explanation of the reasons for using it should be fully discussed with the consumer.

Plan For Long-Term Support. The need for long-term support for the consumer, family, and employer has been discussed. The counselor should address, to the fullest degree possible, the long-term needs that affect maintenance of employment in the closure plan.

Consumer Needs. The counselor should work with the consumer to identify their needs, establish supports, and develop contingency plans to be implemented in the event of a breakdown in support. Problems in the areas of housing and transportation are common and have a direct impact on job retention. Alternate or back-up transportation plans should be discussed. Various housing options also may need to be investigated. Social isolation, loneliness, and substance abuse have been identified as significantly affecting employment outcome. Remedies may include consumer involvement in a support group or the development of specific recreational and leisure time plans. The employer may offer an employee assistance program that could be helpful to the worker as well.

Family Needs. Families with high levels of stress should be referred to agencies or support groups for help in handling their own needs. Gerald Bush (1989), former Chairman of the Board of the National Head Injury Foundation, addresses this issue in an article on catastrophic case management. He states that "...the case manager should train the client/family to be ultimately accountable for optimal outcome. ...[and] should train the client/family in the knowledge and techniques necessary for evaluation and self-advocacy" (p. 99).

It is recognized, however, that in many cases the family will need assistance from the counselor to develop needed support and coordinated services with various community agencies.

Employer Needs. Meeting long-term needs of the employer is critical to the success of the employment outcome. The importance of follow-up was discussed and strategies described. Methods of employer education have been suggested. The employer should have a means by which to obtain assistance with any job-related problem the worker has after case closure.

Plan For Community Support

Employment is seen as the culmination of a long process of physical, cognitive, and

vocational rehabilitation. For the person with the acquired brain injury, it may be the beginning of a new phase of self-discovery and independence. Significant effort was made to ensure continuing successful employment. However, the need to address long-term support issues can not be overstated. To ignore these issues and fail to make plans for them will frequently result in loss of employment and associated emerging problems.

All of the needs identified cannot be met through the use of formal system "mechanisms." It is unrealistic to believe that any one agency can meet all of these needs. Perhaps more than any other group, people with acquired brain injury require coordination of multiple systems to achieve long-term vocational success. The necessity of coordinating these systems and the components within them to establish long-term supports is a challenge to the rehabilitation counselor.

The counselor is urged to develop and coordinate community services through other agencies and organizations. Existing community service providers can serve individuals with brain injury through existing services. Communities can respond to the needs of individuals with brain injury and their families (Courtney, 1992). Networking with agencies such as Mental Health, community counseling services, transportation and housing providers, community recreation programs, and others is time consuming for the counselor; however, including these types of support services in the closure plan can greatly enhance the probability of the consumer successfully maintaining employment.

It is recognized that planning for closure and developing the mechanisms to provide long term support takes time. Policy makers and administrators are urged to allow counselors the time and flexibility needed. Counselors are encouraged to continue their advocacy efforts on behalf of persons with acquired brain injury.

Chapter VI

ADMINISTRATIVE ISSUES

INTRODUCTION

Vocational rehabilitation services designed specifically for persons with acquired brain injuries are relatively new arrivals to the state/federal vocational rehabilitation program. The development of specialized vocational rehabilitation programs and services for persons with acquired brain injury is still in its infancy because of this limited history. Persons with acquired brain injury have a complex array of residuals (both physical and behavioral) and other problems. Many vocational rehabilitation counselors are inexperienced and unsophisticated concerning the rehabilitation needs of persons with acquired brain injury and currently available services. This combination of complex problems and untrained vocational rehabilitation counselors is a deterrent to successful rehabilitation of persons with acquired brain injury.

It is understood that funding alternatives are not readily available to alleviate the limited resources, training needs, eligibility issues, and high costs of working with this population (U.S. Department of Health and Human Services, 1989; Corthell, 1990; Veldheer, 1990). However, this chapter will address many of the administrative issues and dilemmas related to vocational rehabilitation service provision to persons with acquired brain injury.

ADMINISTRATIVE COMMITMENT

In order to adequately serve persons with acquired brain injury, the agency must make an administrative commitment to ensure quality service provision. Acquired brain injury rehabilitation often requires specialized programming, specific staff expertise, and significant case service funding. Because of the complexity of the residuals from this disability, it has often been difficult for staff to adequately serve all consumers with acquired brain injury on their caseloads. Agencies that do not make a strong commitment to effectively serve persons with acquired brain injury will develop only marginally effective service delivery practices.

Lack of commitment to serve persons with acquired brain injury may be due to such factors as higher priorities of service to other disability groups, unfamiliarity with disability, funding shortfalls, or other reasons. However, the result is a lack of effective case finding strategies that ensure timely processing of acquired brain injury referrals. Commitment is necessary to maintain, develop, and/or expand case finding activities to ensure that all individuals with acquired brain injury who may benefit from vocational rehabilitation services receive them. Timely referrals require maintaining close contact with trauma centers and hospitals, outpatient programs, rehabilitation facilities, and head injury associations and support

groups. Many local offices designate counselors to network with these facilities and organizations. Such arrangements have proven an ideal mechanism to ensure timely referrals.

Proactive outreach will occasionally result in premature referral. In this case, however, counselors are notified of potential cases at an early date. The counselor may then educate the referring agency as to the criteria for an appropriate referral. The referral source can then be assured that the counselor will take an application at a more appropriate time.

Like most organizations, rehabilitation agencies tend to focus their energies, expertise, and resources upon those issues that are emphasized by the agency's administration. Consequently, if a rehabilitation agency is to become an effective service delivery resource for individuals with acquired brain injuries, appropriate emphasis and leadership must be focused upon that disability population by the agency's management team. This is a particularly important consideration relative to acquired brain injury and could be partially addressed by creating the acquired brain injury coordinator position.

STATE AGENCY ACQUIRED BRAIN INJURY COORDINATOR

Many state vocational rehabilitation agencies have established a statewide coordinator position. Individuals in these positions enhance service provision to consumers with acquired brain injury. In these positions the acquired brain injury coordinator serves as a resource by providing technical assistance to agency and other rehabilitation personnel. Acquired brain injury coordinators usually are housed in the agency's central administrative office although in larger states there may be such a position in larger district offices. Some of the duties performed by these individuals include:

1. Providing technical assistance and consultation to agency staff at all levels;
2. Developing training and educational programming for agency staff;
3. Assisting in development of acquired brain injury policy and procedure;
4. Creating innovative funding mechanisms to help mediate the high cost of serving persons with acquired brain injury;
5. Chairing or serving on consumer/professional advisory groups;
6. Researching and evaluating data relative to effective vocational rehabilitation practices;
7. Facilitating the development of a coordinated service delivery system; and
8. Integrating knowledge of research, technological advances, and vocational rehabilitation enhancements into agency service provision and training.

As the agency consultant on brain injury, the coordinator can serve in the capacity of analyst concerning specific acquired brain injury issues that are of common concern to agency staff. This individual can also foster coordination and planning activities relative to agency service provision. Serving as the state agency focal point, the coordinator enhances collaboration with other public agencies and the private sector. The acquired brain injury coordinator may also facilitate curriculum development and the implementation of training programs to agency staff.

Another important role of the acquired brain injury coordinator is to serve as liaison with state and national entities that focus upon acquired brain injury. These include state chapters of the National Head Injury Foundation, Research and Training Centers that focus on acquired brain injury, and the Rehabilitation Services Administration (RSA) funded regional acquired brain injury centers. The coordinator should serve as a conduit for transmitting important information from such specialized resources to appropriate individuals within the agency. These resources often provide specialized training concerning acquired brain injury.

State rehabilitation agencies that do not staff a brain injury coordinator position often have difficulty gaining maximum benefit from such resources. Specialized acquired brain injury Research and Training Centers and RSA regional acquired brain injury centers often have limited training slots. If a trainee is sent, the benefit may be restricted to counselors working in close proximity to the individual who receives the training. On the other hand, if the statewide coordinator participates in such training this information can be shared with all appropriate individuals on a statewide basis.

One of the most important functions of the coordinator is to serve as an internal agency advocate for effective services for individuals with acquired brain injuries. All vocational rehabilitation agencies are mandated to serve persons with diverse disabilities. Because of this responsibility, they are continually faced with the issue of deciding where to place emphasis, how to allocate resources, etc. Unless there is internal advocacy within the agency, persons with acquired brain injury could easily be underserved and not receive sufficient or appropriate agency resources and attention.

SPECIALTY COUNSELORS

Through training opportunities and/or through their own counseling experiences, many vocational rehabilitation counselors have become specialists in serving individuals with acquired brain injury. Typically, these individuals are assigned applications from persons with acquired brain injury. It is usually advantageous to maintain at least one counselor who has this knowledge and ability in each vocational rehabilitation field office. This may be achieved by providing education and training services to vocational rehabilitation counselors statewide.

It should be noted that the designation of specialty counselors is usually more appropriate in urban areas where there are high concentrations of persons with brain injuries. Because of travel requirements and other considerations, it is usually not feasible to designate specialty counselors serving only persons with brain injuries residing in sparsely populated rural areas.

However, it is key that counselors who demonstrate this expertise and interest be identified.

Designation of specialty counselors for acquired brain injury in urban areas can create expertise among a network of specialty counselors. Then the expertise of these personnel can be shared with other counselors throughout the state These counselors can serve as resource persons for technical assistance as well as trainers in regional and statewide training activities. They can also serve as a laboratory for the agency to test new strategies in working with consumers with acquired brain injury. Additionally, the specialists may serve as advocates within their respective communities to identify needs and work with community resources to develop solutions to those needs.

It has long been demonstrated in the rehabilitation field that counselors with specialized training that focuses upon one specific disability group tend to develop higher levels of expertise. This applies to brain injury counselors as well. Designating specific counselors to work primarily with consumers with acquired brain injury enables the agency to focus training efforts upon those counselors. This facilitates the development of the necessary expertise to effectively serve these persons. Moreover, the very fact that such counselors work with significant numbers of individuals with acquired brain injury on a regular basis promotes the development of effective counseling and case management skills. Designation of specialty counselors also enhances individualized counselor case service allocations, liaison responsibilities, and closure expectations in terms of the target population. The end result is a network of counselors with appropriate expertise, focus, and resources to meet the needs of individuals with acquired brain injury.

CASE MANAGEMENT ISSUES

It is important to review the four criteria set forth within one of the precursors to this publication from the University of Wisconsin-Stout, Institute of Rehabilitation Issues. In 1985, Corthell and Tooman indicated key considerations to evaluation are the following:

1. The person's ability and willingness to participate in the evaluation process,

2. The current stage of improvement,

3. Service appropriateness, and

4. Alternate services and/or funding options.

It should be emphasized to counselors that all of these four criteria should be evaluated prior to provision of services. Often, there may be circumstances through which abilities are enhanced through use of nontraditional vocational rehabilitation practices. Counselors given the flexibility by administration to experiment with these nontraditional services are often highly successful. For example, they may insist that vocational evaluation reports focus on function rather than only evaluating deficit. Traditional evaluations primarily emphasize clinically-oriented diagnostic findings (intelligence testing, clinical examination) rather than focusing on capability within the

work or "real world" environment.

Many states require that certain information must be included within the case file (general medical, etc.), which may or may not necessarily enhance the vocational rehabilitation effort. In an effort to reduce the medical diagnostics load, the 1992 Amendments to the Rehabilitation Act appear to de-emphasize the purchase of "unnecessary diagnostic information" (i.e., general medical exam) when those services are not integral to eligibility determination. Previously, case certifications may have been based on clinical diagnostic information rather than more accurate function-based work capacities. The counselor should be allowed the professional freedom to make that call (Fraser, 1991; Tanquary, 1991).

Similar to other severe disability groups, counselor effectiveness in working with consumers with acquired brain injuries is to a significant degree dependent upon practical issues. These may include caseload size, agency expectations, and case service allocations. If counselors are to be effective in providing quality services to persons with brain injuries, their caseloads must be maintained at reasonable levels to allow time for working with individuals who require significant counselor involvement.

Closure expectations must also be established at reasonable levels. An agency must allow counselors to spend the time and resources necessary to obtain employment outcomes for persons with brain injury. Often these individuals will require substantial services over an extended period of time.

Adequate case service allocations must be available to counselors in order that they may purchase the necessary services leading to successful employment outcomes. For example, a counselor may have several consumers with brain injury requiring specialized post-acute brain injury programming. These services usually are not received in a timely fashion unless adequate financial resources are made available to the counselor.

While these issues impact all counselors to some degree, they are particularly salient issues for counselors whose major responsibilities include serving persons with acquired brain injuries. If such counselors are to be effective, it is incumbent upon management to provide reasonable expectations in terms of caseload size and closure expectations in addition to adequate resource allocations. Expecting counselors to effectively serve consumers with brain injury without adequate time, expertise, and resources leads to frustration on the part of counselors and their rehabilitation partners.

RESOURCE DEVELOPMENT

The federal vocational rehabilitation program is the primary case coordination system for persons with severe disabilities. This program is not an entitlement program with clearly delineated fiscal guidelines. Rehabilitation counselors attempt to provide consumers eligible for vocational rehabilitation with appropriate services necessary for employment. However, due to already limited vocational rehabilitation funding, counselors have also become fiscal planners. All state vocational rehabilitation agencies urge counselors to seek alternative funding sources

to facilitate the rehabilitation process (i.e., Medicaid, community service groups, innovative funding mechanisms, employer assistance, natural supports, etc.). However, as Menz and Thomas (1990) indicate, state services from multiple agencies tend to be fragmented due to systemic issues, limited resources, lack of staff awareness, and other causes. This further complicates the effective management of already difficult and complex rehabilitation cases.

Many coordinated funding activities are addressed at the administrative level. For instance, formal "blended" funding arrangements are developed with other public entities such as state mental health and Medicaid agencies whereby all agencies combine forces to provide funds in a cooperative manner. Interagency training on eligibility issues and processes may facilitate this level of coordination between agencies. Many state vocational rehabilitation agencies do not authorize transitional living programs for their consumers. However, if other state agencies cover habilitation and nonvocational rehabilitation related medical expenses, the vocational agency would only be responsible for expenses attributed to vocational rehabilitation. This shared approach reduces the financial burden on any single agency and enables short-term residential placements for individuals who would benefit from such services.

Other administrative efforts could also foster the development of brain injury trauma registries, state plans, public and private cooperative agreements, state operated rehabilitation facilities and programs, coordinated and comprehensive managed-care programs, housing, other support services, and trust fund legislation. All of these mechanisms have been developed and implemented in many states nationwide. The use of the electronic bulletin board "Rehabnet" will enable the state vocational rehabilitation agency to contact other states to determine the extent and effectiveness of acquired brain injury service provision in respective states.

To a significant degree, the effectiveness of vocational rehabilitation agencies, working with individuals with acquired brain injuries, is dependent upon the availability of service delivery resources. This includes both resources within the agency as well as community-based resources operated by other organizations. Individuals with acquired brain injuries usually derive more benefit from programs and services that are focused upon their specific needs rather than services that were designed for other populations such as persons with mental retardation or mental illness. Consequently, to achieve optimum effectiveness in serving the acquired brain injury population, vocational rehabilitation agencies should take a proactive stance in terms of resource development. This should include identification of community-based programs and services that focus upon acquired brain injury and development of service arrangements with those organizations. Where such services do not exist, the agency should pursue development of specialized services.

Examples of such services include: (a) specialized vocational evaluation, (b) supported employment programs, and (c) neuropsychological and post acute acquired brain injury services. These services should address cognitive and behavioral issues from a vocational rehabilitation perspective. Post acute rehabilitation programs should provide a continuum of transitional services. These services should extend from clinical services through employment in the community, with necessary supportive services such as job coaching.

It is important that post-acute acquired brain injury programs focus primarily upon

development of coping skills and compensatory strategies in a "real world" setting, continuing through employment in the community. This issue is important because individuals with acquired brain injuries often do not generalize well from one environment to another. Consequently, coping skills and compensatory strategies should be addressed in the environment in which they will be used to the greatest degree possible.

CONSUMER INPUT

The amendments of the Rehabilitation Act require that state vocational rehabilitation agencies incorporate recommendations from state consumer advisory councils in development and implementation of vocational rehabilitation program activities (RSA, 1993). Relative to vocational rehabilitation programming activities for persons with acquired brain injury, efforts must be applied to securing input from consumers, their families and guardians, professionals, and advocacy organizations on behalf of persons with acquired brain injury.

The importance of consumer involvement in the rehabilitation process has become increasingly emphasized in recent years. As with other disability populations, consumer involvement is necessary in the development of effective vocational rehabilitation programming for individuals with acquired brain injuries.

The process for acquiring consumer input may vary from state to state. At a minimum, input should involve appropriate representation of survivors of acquired brain injury and their family members on the agency's state rehabilitation advisory committee.

It is often appropriate to develop a specific advisory committee for acquired brain injury, particularly if the agency has developed substantial rehabilitation programming. Care is necessary, however, to assure that survivors are involved in this process as well as family members and service providers.

STAFF TRAINING

Development and maintenance of staff with expertise in the vocational rehabilitation of individuals with acquired brain injuries are important administrative considerations. Staff expertise is vital if an agency is to be effective in working with acquired brain injury. Quality training is available from a variety of resources at the state, regional, and national levels. These resources, both public and private, should be used to the greatest extent possible. Excellent training is available from such resources as the six RSA-funded regional brain injury centers, research and training centers, rehabilitation institutes, etc. Unfortunately, training slots available in these programs are often limited. Consequently, vocational rehabilitation agencies committed to developing and maintaining a high level of expertise in working with individuals with acquired brain injury must incorporate training into their staff development programs. Moreover, in view of staff turnover and reassignment, such training must be viewed as an ongoing process rather than a one-time endeavor. To obtain maximum benefit, training should (a) be practical rather than theoretical, (b) include resources and strategies for this population, (c) be relevant to

counselor needs, (d) be frequently available, and (e) include survivor and family perspectives as well as those of professional staff. A number of states have developed excellent training programs, usually in collaboration with existing acquired brain injury rehabilitation research projects.

REFERENCE MATERIALS

In addition to formalized training activities, agencies should acquire and/or develop acquired brain injury reference materials and disseminate them to counselors and other appropriate agency staff. Such reference materials augment training activities by providing counselors with information that is readily available when needed. Information for this purpose is available from the NHIF, regional brain injury centers, research and training centers, RSA-funded model programs, and universities. A suggested reading list can readily be acquired from the references used in developing this document.

Reference materials may be maintained by the agency acquired brain injury coordinator, or perhaps in a centralized resource library. An up-to-date listing of available materials within the agency should be available to staff, regardless of the location of the publications. For instance, counselors often maintain libraries of acquired brain injury-specific vocational rehabilitation publications, neuropsychological information, innovative counseling and rehabilitation techniques, and other similar types of information. If these resources are the property of the agency, the agency should aggressively seek to establish a directory of such resources and make the information available to all staff.

AGREEMENTS WITH HEAD INJURY ASSOCIATIONS

It is extremely important that the vocational rehabilitation agency develop liaison activities with state and local chapters of the National Head Injury Foundation. This should include a written agreement at the state level specifying areas of cooperation. The agreement should include reports by both entities on individuals referred, served placed in employment, etc. This relationship can become an extremely effective force for the development of coordinated programming within a state.

Some state vocational rehabilitation agencies and consumer organizations such as state chapters of the NHIF have joined hands in pursuing the same advocacy efforts. When such collaboration occurs, the chances of improving state service delivery systems are greatly enhanced. Many states have accomplished this and have developed functional cooperative agreements resulting in a high level of collaboration among participating agencies. The National Head Injury Foundation can provide a listing of many state chapters that have developed such agreements with state vocational rehabilitation and other agencies.

INTERAGENCY COORDINATION

Enhanced vocational outcomes for persons with acquired brain injury occur when vocational rehabilitation agencies develop effective networking capabilities and working relationships with other community-based programs. Examples of these organizations include but are not limited to consumer-managed independent living centers, personal attendant service providers, housing and transportation programs, home health care services, and Medicaid waiver programs. While such programs are not necessarily focused upon employment outcomes, they offer critically important support services that are often necessary to enable an individual with an acquired brain injury to function in employment. If such services are not available to enhance vocational rehabilitation services, the chances for successful employment outcomes may be significantly diminished (Menz & Thomas, 1990).

DATA RETRIEVAL

As indicated within the Interagency Head Injury Task Force Report (U.S. Department of Health and Human Services, 1989), "Planning of model systems for the care entails deriving information from diverse databases and epidemiological studies" (p. 22). Much emphasis has been placed on the need to establish registries in each state as well as on a national level. Information such as incidence, follow-up, and coordination of services can then be identified. This ultimately will enable delineation and acquisition of necessary resources and foster the development of prevention programs.

In a similar effort to determine the effect that brain injury has on vocational rehabilitation agency resources, assessments of agency demographic and fiscal data must be completed. These assessments may enable administrators to determine current trends and future needs and perhaps aid in placing priorities on efficient allocation of agency resources. This effort will be enhanced if the state maintains a brain injury registry (Corthell, 1990; Wehman & Kreutzer, 1990).

Vocational rehabilitation agencies that are consistently effective in serving persons with acquired brain injuries monitor and evaluate the quality, outcome, and scope of their services. In this regard, it is important for the agency to establish an automated data collection and retrieval system that will enable it to periodically evaluate the following:

1. How many individuals with acquired brain injuries are being referred;
2. Where those referrals are coming from;
3. How many are being accepted for service,
4. What services are being provided;
5. Costs; and
6. Service outcomes (including evaluation of service provider outcomes).

Without such capabilities, it is difficult for an agency to adequateiy assess its effectiveness in serving this population. With such capabilities, the agency can readily determine its strengths in serving this population and also identify areas needing improvement.

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Appendix A

Understanding Neuropsychological Factors Related to Work Performance

UNDERSTANDING NEUROPSYCHOLOGICAL FACTORS RELATED TO WORK PERFORMANCE

ATTENTION AND CONCENTRATION SKILLS

Among one of the most common problems following a brain injury are difficulties with attention and concentration. Difficulties in this area may cause problems with memory, since attention and concentration are prerequisites for new learning to occur efficiently. Brain injury can aiso cause problems in the areas of attention to visual detail and distractibility. At work, these difficulties may lower productivity levels. Problems in not recognizing errors, not providing adequate attention for safety reasons, and many other similar difficulties may be related to inattention. Several important factors that should be considered when assessing the attention and concentration skills of persons with traumatic brain injury include the following:

1. Can a person sustain attention and focus their concentration for a protracted period of time?

2. Can they continue to sustain attention when distracted either visually or verbally?

3. Can they demonstrate selective attending skills, as may be the case with a receptionist who is required to type while at the same time keeping an eye out for staff members to deliver messages, etc.?

4. Do medications affect attention and concentration? Stimulant drugs or medications for depression may dramatically improve attention and concentration. By contrast, other medications such as major tranquilizers, anti-psychotic medications, or drugs to control seizures may make the persons more distractible or make them feel that they are "in a fog." When this is the case, a medication evaluation by a psychiatrist or a neurologist familiar with the case is advised. Pharmacies will often provide consultation regarding medication side effects and make recommendations for use of prescription medications, they will also give contra-indications for use.

5. Are there times when the persons function best? For example, some persons may work with minor visual distractions. Others must require ı ear total isolation from such distractions in order to be visually attentive. During times of stress or fatigue, attention and concentration may also diminish.

6. Do attention and concentration improve when the persons are very interested or highly motivated? A person with a long work history as a semi-truck driver may recall more details on a memory test dealing with a recall passage about a truck driver than one about a school disaster. In a functional sense, a similar phenomena may occur on the basis of the person's interest in the work being performed.

7. Will the application of rehabilitation technology, environmental adaptations, or remediation be of benefit? At times, simply changing a position in the work place, providing a visor hat to eliminate overhead distractions, or improving the intensity

of the lighting may be of benefit. Also, remediation strategies such as teaching people to scan their environment may improve visual attention to details. Teaching persons to double check their work may also be of benefit if they can remember to do this on a consistent basis. Jigs and fixtures have been a time honored tradition in vocational rehabilitation and the application of this technology is an invaluable part of the counselor's ability to minimize functional limitations. Other devices such as intermittent timers using sounds or a vibration at variable intervals of a few seconds to several hours may help a person who needs cuing in order to self-monitor behaviors or to employ compensatory strategies.

INTELLECTUAL SKILLS

A number of functional attributes typically assessed by intelligence tests are important factors contributing to adequate psychosocial and on-the-job functioning. Neuropsychologists do not always do a thorough job of explaining this information but may report scaled scores from intelligence tests. Developing a good working knowledge of what each of the tests purports to assess is a valuable skill for counselors to develop. Since intelligence tests measure a wide variety of abilities and skills, understanding the relative importance of the consumer's good or poor performance will be of value in formulating vocational rehabilitation plans for the person with traumatic brain injury.

While an Intelligence Quotient (I.Q.) score does give an indication of a person's general intellectual ability, other constructs measured by intellectual tests are even more important as indicators of a person's future success (or failure) in the world of work. This is especially true if wide variability occurs between and among verbal and performance measures. For example, a person may display good performance skills on an intelligence test but verbal and general language processing capacity may have been greatly reduced by trauma. This individual will likely demonstrate better hands-on knowledge and better visual-spatial skills than knowledge of general facts and information, vocabulary, or oral expression skills. By contrast, when verbal skills are a relative asset and performance skills are consistently and significantly lower, one may see an individual who a) appears verbally bright, articulate, and talks a good game; b) may have difficulties with hands-on learning or visual-perceptual tasks, and c) in some cases has problems with skilled motor performance. The counselor may find that the results of intelligence testing do not seem to represent the person's observable traits and abilities. In such cases, the ability of that person to demonstrate certain related skills is important as is outlined in the discussion below. Some of the skills observed during intelligence testing may be observed through other functional assessment means. These factors, which are commonly referenced in psychologist's reports, are discussed in the following examples. Relationships between the traits as assessed in testing and the implied functional skills are often the basis of behaviors targeted for observation during vocational evaluation. A competent psychologist will verify any hypothesis formed about a skill by a single test result with other test results or functional correlates.

General Fund of Information

This construct includes a person's ability to demonstrate knowledge of the world around him as well as historical events and is often a reflection of what a person has learned in the course of his/her educational development. This indicator is seldom a good predictor of who will do well on a performance type of job but may be important to consider for other reasons. For example, a person who demonstrates a good fund of general information may be seen as being competent and knowledgeable. One who lacks knowledge in these areas may be viewed as less intelligent and perhaps less competent, therefore may not be as well accepted by their peers.

Vocabulary

General language, use of terms, and understanding of words are important to a person in order to present a positive image. Many times this kind of information is gleaned from casual conversations but indications of vocabulary skills of an individual are also available through formalized testing. People may do poorly on structured testing because of difficulties with word finding, information retrieval, and expressive language. Because of these problems, tests which use cuing or a multiple choice format are gaining popularity with neuropsychologists (Lynch, 1987).

Abstraction Skills

These skills relate primarily to the application of already acquired knowledge to novel situations. Articulating the similarities and differences between objects and applying applicable abstract principles is inherent in this assumption. Performance on a test to measure one's abstract knowledge of similarities or differences between common objects may be used by a psychologist to imply the presence or absence of verbal reasoning and abstraction skills. However, a person's performance may be clouded by expressive language difficulties or memory problems, giving an erroneous result unless performed by a person with good knowledge of neuropsychology.

Calculation Knowledge

Ability to understand and apply principles necessary to conduct mathematic problems in one's head is assessed by use of tests of arithmetic reasoning. Achievement tests of arithmetic and use of calculators also measure these constructs in a different context. However, a good practice is to observe a job or work task and then have the consumer perform key samples of the job and record the primary functions and requirements. Such a procedure is used to determine functional ability and compensatory strategies that need to be developed or addressed. Although test performance in the area of mathematics is often one of the best indicators of this particular skill area, a work environment may pose special demands not observed in the testing laboratory. Performing calculations, measuring objects, or performing other mathematic problems on the job often must be done in the presence of distractions and time pressures or for extended periods of time. Such factors are best evaluated by work samples, situational assessments, or job trials.

Speed of Information Processing--Speed of Thinking

These attributes are often not measured specifically by psychological tests but rather are implied by careful observation during the examination. Difficulties in this area may have long-reaching impacts on test results as well as on job functioning. Slowing in terms of thinking speed or mental processing speed can be a rather subtle manifestation of a functional limitation that is difficult to assess. Difficulties in this area may not be readily apparent to the casual observer. When slowing of mental processing speed does occur, a lowering of scores associated with timed tasks is often seen. In casual conversations, a person may appear to be deliberating longer or may stare at an individual while thinking. Such behavior may give the incorrect impression of one who is intimidating or challenging. Most typically, slowed cognitive processing speed is manifested by longer latencies in response or at times the response "I don't know." Neuropsychological evaluations frequently address this issue in diagnostic reports, but often this assessment is based on clinical impressions and analysis of examination based performance.

Mental Flexibility

The ability to employ multiple problem solving strategies in the work place requires the use of feedback of task performance to alter future attempts at problem solving and the capability to "walk in another person's shoes." Rigidity in thinking is on the opposite end of the spectrum of this trait. Persons who are extremely rigid in thinking may be referred to as concrete thinkers.

Nonverbal Intelligence

This concept is typically assessed through intelligence tests by examining tasks such as pattern analysis, visual spatial analysis, and other aspects of problem solving which are essentially nonverbal in nature. Performance subtests of intelligence tests are typically related to nonverbal skills. However, a verbal component is nonetheless an important part of giving directions and providing feedback. These features should be viewed in contrast to constructs such as fund of general information, vocabulary, or calculation skills. Persons whose performance function is considerably better do well on subtests requiring hands-on learning, skilled motor performance, perceptual organization skills, and attention to visual patterns and details.

Self-Appraisal

Accurate self-appraisal is required to determine how one is doing, to accurately assess one's skills, and to develop goals and objectives for one's personal and vocational life. It is often the accuracy of one's appraisal as compared to that of a work supervisor that is a more critical factor than whether or not a deficit in any other specific cognitive area exists. Comparing opinions of a person with a traumatic brain injury to their significant other's opinion on such factors as ability to learn, emotional stability, and stamina and endurance may serve as a means of a "reality check," assuming the significant other's opinion is accurate.

LEARNING AND MEMORY

The concept of memory contains a host of complex psychological variables that demand careful consideration. One of the obvious factors involved in memory which is familiar to everyone involves remote or historical memory. Tests commonly administered by clinical psychologists and psychiatrists assess a person's knowledge of such items as "Who is the first man to circumvent the globe? Name four men who have been vice presidents of the United States. Who is the governor of the state? And, in what year did World War II end?" Such information is actually based on what was known to the individual prior to the head injury. Although this represents a type of memory, such questions examine knowledge of previously learned material and the ability to freely recall that information on demand. The names of your first and third grade teacher and your parent's address also fall into this category.

Recent historical memory includes factors such as information learned in the recent past (since the time of the head injury), news items, and incidental memory for personal matters. This type of information is typically not as well ingrained as information rotely learned in one's elementary school years, but it may also be considered as a form of historical memory.

New Learning

Acquisition of new information or learning typically describes one's ability to attend, concentrate, process information, and hold it in memory for a short period of time. Next, new information is integrated into a longer term or delayed recall memory, then re-accessed, and finally presented when necessary. All of these aspects are typically considered as important to the assessment of the ability to learn new information.

Verbal learning is typically associated with the acquisition of new information through verbal or auditory means. One example of a verbal memory test is one in which a person is given a list of 12 or 15 common, but unrelated, words that the person is asked to attempt to memorize over five to ten consecutive trials. Another example is a test which requires a person to attempt to memorize a grocery list over several repeated trials. Typically, most psychologists also use a distractor task such as the learning of a different list to determine if the information from the first list has been consolidated into memory and available for demand recall. A delay of 30 minutes is then given to determine if the information is still available for later recall, and if not, if the information can be produced when the person is given a cue or is asked to select the correct words from a list which also contains other words.

Paired associate learning tests are another type of memory measurement frequently used. This type of test requires learning a list of word pairs with easy association (for example, whenever I say the word "map," you say "highway") and those with no common association to cue one's memory (when I say the word "book," you say the word "wall"). These tests are known as tests of associate learning. Recall of lists of unrelated words, or recall of semantic information such as stories that have been read to a person and similar such tasks, are both viewed as measures of verbal learning ability.

Other memory tests purporting to measure verbal memory may involve reading a person

a story and then asking him/her to recall the details of the story immediately afterwards and again one-half hour later. Memory for numbers read to a person are typically also included in testing batteries to assess immediate recall learning. However, this is frequently interpreted more as a measure of freedom from distractibility or auditory attention than of a test of true verbal memory per se. Often people with significant memory problems can perform remarkably well on immediate recall of numbers, but after an hour may not even recall the exercise.

Each of the above memory measures yields an assessment of a different type of learning and memory. It is common for a person's scores on these memory measures to vary, sometimes considerably. The use of such tests may provide clues to a person's best style of learning. Learning style is further explored through more functional means, such as recall of work instructions. If there is a problem, learning style is explored without, and then with, some type of compensatory strategy or technological intervention. For example, a person may demonstrate poor memory for serial list learning, story recall, and retention of work instructions. This person may find that the use of Post-it Notes, a vest pocket dictaphone, or a pocket memory notebook enables him/her to function adequately most of the time. It is important for the evaluator to be aware of such techniques and to try alternate ways of improving recall. If compensatory strategies are not consistently applied during the course of the assessment, many of the conclusions of the evaluation may be invalid. Unfortunately, many neuropsychological evaluations include standard commercial memory measures and do not evaluate one's learning capacity with the use of memory assistance techniques or technology. The trial use of alternate learning strategies is therefore a critical element for the evaluator to explore.

Some of the above also applies to non-verbal memory which may include visual memory, procedural memory, and other types of learning and memory with an apparent minimal involvement of language functions. A primary characteristic of verbal memory is the reliance upon language processes. Some neuropsychologists may argue that memory is a cognitive function with little differentiation between modalities used to process new information (visual, verbal, etc.). However, people do exhibit certain preferred learning styles as a result of personal preference or due to differential abilities in learning modalities.

Visual memory testing may involve the recall of patterns, shapes, or features of another person's face. Sequence of events are also used with the counselor performing a sequence of behaviors without talking his/her way through it and then having the consumer perform the task as shown. Visual perceptual problems resulting from a brain trauma are likely to affect performance on visual memory tasks, a factor that needs to be taken into account when using the results of visual memory testing.

Hands-on learning refers to "learning by doing." Typically, persons who have had a head injury do better when they actually perform a task rather than give "paper and pencil" answers. This is because a number of sensory modalities are being used including auditory, visual, proprioceptive, tactile, and at times smell. There appear to be preferred learning styles among persons with a brain injury as a result of personality style, nature of the brain injury, and other intervening variables. If one is uncertain of a consumer's preferred learning style, trial and error approaches to teaching work tasks during vocational assessment should provide valuable information as to how to present new information to be learned.

Other Factors Relevant to Learning

Information such as whether or not cuing or priming can help elicit recall of newly learned information is important in the assessment process. Oftentimes, an individual can recall information if provided with the right clues. Use of memory notebooks, memory jogging techniques, or in some cases mnemonic devices may help improve a person's capacity to recall information that has been learned. Information about effective recall techniques to use with a person may be provided by the person with the brain injury, his/her family, therapists, or through observations during a vocational assessment as suggested earlier.

Rate Of Improvement of Cognitive Skills

The rate at which an individual is recovering skills such as attention and concentration, ability to filter out unnecessary stimuli, and improvement in actual memory skills is an important factor to consider. There is an ecological factor that strongly affects the learning rate of new information. A person with strong work-related experiences, for example, may do poorly on learning in a laboratory situation but may demonstrate good compensatory techniques on the job. An on-the-job experience in a community worksite often allows a person additional environmental cues that may assist new learning. Regardless of whether or not memory problems seem to have been documented by previous testing, a functional assessment of memory deficits is always advised. The evaluation should start in a controlled situation and then (if problems are not encountered or are overcome) assessed on the actual job to which the person will be going.

MOTOR SKILLS

Sensory Perceptual

These factors may or may not be detailed in a neuropsychological evaluation. However, they must be examined when considering community-based employment. The following is a listing of some of the common factors within this category:

- Ambulation and balance
- Strength and stamina (the fatigue factor)
- Fine and gross motor skills
- Range of motion/contractures
- Dexterities
- Sensory loss, pain, numbness or movement problems
- Smell and taste
- Hearing
- Vision system problems or medical conditions (such as chronic pain, diabetes, epilepsy, headaches, etc.)

Psychomotor Skills

These types of skills are typically assessed during the course of a vocational appraisal. Assessment of these traits may involve the use of standardized dexterity or motor skill tests, work samples, or a situational assessment of performance in a work situation. Typically psychomotor skill deficits affect the ability to work quickly and accurately with one's hands and to demonstrate motor steadiness and control. Adequate performance is also related to one's ability to perform two functions simultaneously, such as reaching for different parts for an assembly with each hand or when collating papers.

Simple Assembly Skills

Assembly tasks require the ability of an individual to quickly and accurately put objects together in a designated manner. Assembly also requires the ability to demonstrate fine motor skills such as twisting or turning motions. Sequencing of these assembly actions are typical fare in a vocational appraisal. A work sample that involves tasks such as a nut, bolt, and washer assembly is a typical type of work sample used to assess assembly skills. Commercially available dexterity tests often are also used to assess these factors.

Fine Motor Speed and Control

The ability to make fine motor movements in a quick, repetitive fashion with accuracy is often assessed by work sample and on-the-job assessments. Dexterity tests also measure these traits quite well. Motor tasks that do not require a high degree of visual attention or spatial relation skills may also assess these functions.

Gross Motor Control--Coordination

Tasks which require lifting, bending, stooping, placing, and gross turning motions would be included in this category. Commercially available work samples and dexterity tests provide an evaluator with an opportunity to observe a person performing hands on operations as well as to quantify performance for normative comparison. Although on-the-job performance may be the best way to assess these traits, it is usually advisable to observe a person suspected of having gross motor control or coordination problems prior to placement on a job site. Prior testing is mandated for safety reasons if moving machinery or hazardous materials are a factor at the work site.

Reaction Time

Choice reaction time tasks assess motor reactions in a fairly reliable manner. Inferences of one's ability to react quickly are often assessed by observations on other assessment tasks. Often, good reaction time is required by a job such as removing a reject part from an assembly line or driving a motor vehicle in and around hazards in the road. Jobs that require assembly line operations, machine operation, and machine tending often require a person to have at least average ability to react to a given job-specific stimulus. This ability is adversely affected by inattention and distractibility. Therefore inattention and distractibility are important to consider

when assessing persons with a traumatic brain injury. Reaction time on a job may require a rapid motor response such as quickly applying the brakes on a motor vehicle. It may also involve a logical analysis of a situation and reacting with common sense as in reaction to a medical crisis or machinery malfunction.

Drawing Skills/Writing

Drawing and writing tasks require both visual motor and visual-spatial skills. These skills are frequently assessed in both neuropsychological evaluations and in vocational assessments. Typically they are assessed by examining a person's ability to write messages or to copy geometric designs. The actual application of one's ability to perform these tasks often are of minimal impact on job performance or return to work. Rather, the reason that these traits are assessed is to examine capacity for written expression, fine motor skills, and visual perceptual skills. Problems with these tasks may imply functional problems in facial recognition, map reading, route finding, and attention to visual details. They are also related to ability to copy complex objects and assemble objects or parts of objects using a visual stimulus as a pattern. Functioning on drawing tasks in combination with other visual perceptual motor tasks are therefore often administered as a screening measure.

Visual-Spatial Abilities

Visual-spatial abilities are typically assessed through neuropsychological evaluations and also during vocational assessment. Visual-spatial abilities include drawing and copying objects, knowing what an objective will look like if cut apart and placed randomly, judging if one object is bigger than another, finding one's way by using a map, or route finding in the neighborhood. Visual-spatial abilities along with motor-related skills are the factors that vocational evaluators tend to be relatively comfortable with assessing and documenting.

SPEECH AND LANGUAGE

Factors relating to speech and language are critical when considering an individual's return to work needs. These factors include the ability to express thoughts, feelings, and emotions; to receive information through verbal and nonverbal means; and to focus during work-related conversations and other psychosocial interactions.

Expressive language typically involves oral expression. It may include such factors as rate, tone, and prosody of speech; word finding; and understandability of the language used. Also factors such as sticking to a topic, relaying an idea or thought from beginning to end, and the ability to economically provide information to a listener are important considerations.

Written expression also needs to be assessed in terms of one's ability to write a message or to use a computer for communication if this is part of the job for the which the person is being evaluated. The use of gestures, body demeanor, body positioning, and distance from others in conversation are other important characteristics involved in expressive language.

Receptive language includes the ability to deal with speech and nonverbal communication such as understanding information being presented by others. This involves the ability to keep one's place in the conversation, to understand abstract terms or figures of speech, to "read between the lines," and to appreciate humor. Reading of body language and body positioning and other nonverbal cues are also essential parts of communicating with others which may be affected following a neuro trauma injury. The ability to maintain focus during a conversation (including turn-taking when conversing) and the ability to demonstrate conversational problem-solving skills are also important factors to consider.

EXECUTIVE FUNCTIONING SKILLS AND HIGHER ORDER COGNITIVE PROCESS

The ability of neuropsychological testing to accurately evaluate and thereby identify difficulties has been a point of considerable debate. Tests of executive functioning and higher order processing skills have existed for a long time and are typically, but not exclusively, associated with frontal lobe functions. These capabilities generally include the ability to plan an activity; to initiate work tasks; and to organize materials, information, and knowledge necessary to perform such tasks. These skills include the ability to self monitor and self correct goal directed behaviors. Executive function is required to interact with the environment or with another person in realigning task performance on the basis of feedback. Although the term is often used in neuropsychological test reports, in the day to day environment it is a very difficult concept for lay people to understand and to identify when these problems occur at the work site.

EMOTIONAL-RELATED ISSUES

Issues typically dealt with in psychological and/or psychiatric evaluations and in vocational appraisals involve issues related to personality, general adjustment, and the presence or absence of psychological problems. Among these are problems with alcohol and drug abuse, general adjustment to disability, underlying (or pre-existing) personality factors, affect, and mood-related disturbances such as depression, mania, or anxiety. The availability of support in dealing with any of these potential problems is at times an even greater issue.

Although it is best to leave the diagnosis and treatment of these disorders to qualified mental health professionals, the vocational counselor or vocational specialist who sees problems in these areas can identify characteristics associated with them. Generally speaking, one's ability to be happy, to be self-sufficient, and to benefit from experience is a function of intelligence, emotional stability, and one's support in the work place from supervisors, co-workers, family members, and the circle of friends with whom the consumer associates.

EFFECTS OF OTHER VARIABLES

Pain, emotional factors, and speed of motor performances may also affect the ability to recall newly learned information. If a person is in pain and is slow in terms of ambulation, he/she may well forget what he/she left a room to get. This type of forgetting may be related

to the amount of time it takes to get from one place to another, the intensity of pain encountered, or the number of distractions that are passed along the way. An individual who is experiencing chronic pain may be less likely to freely recall information upon demand because they were distracted during the learning process. Use of medications may also cloud memories. However, in the case of depression, medication may improve memory. Medications that have anticollergic effects tend to have a negative impact on memory.