

# Traumatic Brain Injury for VR Counselors

Margaret A. Struchen, Ph.D. and Laura M. Ritter, Ph.D., M.P.H.

## Training Session 3a: Understanding Roles of Members of the Interdisciplinary Treatment Team, Evaluations by Team Members and the Utility of Evaluations Conducted by such Team Members.

- [The Interdisciplinary Team](#)
- [Evaluations by Team Members](#)
- [References](#)



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### *The Interdisciplinary Team:*

The importance of the interdisciplinary team in the rehabilitation of persons with disability, including traumatic brain injury, has long been recognized.<sup>1,2,3</sup> In contrast to multidisciplinary teams, where each discipline sets goals individually, members of an interdisciplinary team set goals in a collaborative manner.<sup>4</sup> Interdisciplinary teams are presumed to be advantageous in that they lead to coordinated care for patients and allow for greater efficiency in reaching goals. One advantage of this team approach is that carryover of strategies can be accomplished throughout the client's treatment day, as all team members will be attempting to utilize the same approaches for the target behaviors or goals.

- **Physician:** There are several specialties that may have expertise in the rehabilitation of persons with TBI. **Physiatrists** are physicians who specialize in the rehabilitation of neurological conditions including TBI, stroke, and spinal cord injury. They also treat musculoskeletal injuries, pain syndromes, and sports injuries. Other specialists who may be helpful to your clients include **behavioral neurologists**, neurologists identified as **neurorehabilitation specialists**, and **neuropsychiatrists**.
- **Neuropsychologist:** Neuropsychologists are clinical psychologists with advanced training in brain-behavior relationships. They specialize in the assessment of cognitive functioning. Neuropsychologists often evaluate persons with neurological disorders, including TBI, stroke, and dementia. Neuropsychological evaluations will include a description of the client's cognitive strengths and weaknesses, and recommendations about intervention strategies and referrals that may be of benefit to the client.
- **Clinical or Counseling Psychologist and Licensed Professional Counselors:** Clinical and counseling psychologists and licensed professional counselors specialize in providing individual and family counseling and behavioral interventions to clients with TBI and their families. These professionals assist clients and team members in addressing issues such as depression, anxiety, substance abuse, and behavioral problems. Such professionals may be involved in conducting behavioral assessments and setting up behavioral management approaches to assist a client in modifying problem behaviors.
- **Speech Language Pathologist:** Speech language pathologists specialize in the assessment, diagnosis, and treatment of language and cognitive communication disorders. They also evaluate and treat swallowing problems. Speech-language



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pathologists are frequently the key team member that will help clients with TBI address social communication skills difficulties, often in collaboration with the psychologists and other team members.

- **Occupational therapist:** Occupational therapists work with clients to maximize performance of activities of daily living and to compensate for any residual deficits that may negatively impact task performance. They may work with clients to address visuospatial difficulties and may be involved in such activities as evaluation of driving safety.
- **Physical therapist:** Physical therapists work with clients to improve their ability to move and function within their environment, and to restore and maintain fitness and health. In addition to working with clients in the clinical setting, physical therapists may be involved in conducting functional capacity evaluations to determine physical readiness to return to certain types of jobs or job requirements. They may also be involved in conducting on-site or in-the-community evaluations of safe mobility.
- **Rehabilitation counselors:** Rehabilitation counselors specialize in working with clients with disabilities. They provide personal and vocational counseling and coordinate vocational training and job placement services for their clients. Rehabilitation counselors from State agencies may not be direct clinical care providers within a given rehabilitation treatment setting; however State VR counselors should be viewed as a critical part of the treatment team.
- **Recreation therapist:** Recreation therapists provide recreation resources and opportunities to improve health and well-being in persons with illnesses or disabilities. With regard to issues related to return-to-work, such therapists may be helpful in evaluating and promoting social communication and teamwork skills that may be affected by TBI. Such skills are invaluable in a work environment. In addition, such therapists are often involved in working with clients in real-world settings where observation of the impact of cognitive impairments on performance in such environments can be very important to the development and implementation of compensatory strategies.

[Return to top](#) or [Continue](#)



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### *Evaluations by team members:*

- [Neuropsychological Evaluations](#)
- [Functional Capacity Evaluation](#)
- [Driving Evaluations](#)

The following section will detail some of the types of evaluations that you may solicit and/or receive that will assist you in case management for your client with TBI. While not an exhaustive list of the evaluations rehabilitation team members provide, these evaluations are likely to be useful in your planning of interventions and services. Each of the rehabilitation team members will perform evaluations relevant to the areas of functioning that are related to their specialty areas and all of these evaluations will be useful in determining individual client goals.

[Return to Evaluations](#) or [Continue](#)



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### Neuropsychological Evaluation:

A neuropsychological evaluation involves the use of interview, observation, and behavioral measures to systematically examine the relationship between brain functioning and behavior. Since cognitive, emotional, and behavioral difficulties are common after TBI, individuals with TBI are typically referred for neuropsychological evaluation at some point in the initial year after injury.

As a VR counselor, you might refer your clients for neuropsychological evaluation to obtain information about what services may be needed and/or helpful in facilitating your client's readiness to return to work or to obtain employment. If your client has already undergone neuropsychological evaluation, be sure to make note of when the evaluation was conducted. If a neuropsychological evaluation was performed many months or years ago, then the information in the report may no longer be accurate, and a re-evaluation may be warranted. Below are some examples of the types of data you can make use of from the neuropsychological report:

- **Areas of cognitive weakness** – the report will describe areas, such as memory, attention, processing speed, language, visuospatial functioning, and problem-solving, of cognitive difficulty. You can use this information to determine the extent to which you will need to encourage modifications at the workplace. For example, if the report states that your client has significant memory problems, then you will want to consider encouraging your employer and co-workers to use strategies such as providing information to your client in short chunks, asking your client to repeat information back to ensure understanding, and other strategies discussed in [Module 2](#).
- **Areas of cognitive strength** – the report will also describe areas of cognitive strength that your client may possess, which you can try to maximize upon in the workplace. If, for example, your client has good expressive language, but is also experiencing motor weakness that interferes with the ability to write, encourage your client and his or her employer to interact in ways that do not require your client to write information down, but be verbally expressive. Perhaps when considering job placement issues, a client such as this might be better suited to work as a greeter in a department store, rather than an office assistant.
- **Emotional functioning** – the neuropsychological report will likely include a section on emotional functioning, which will describe the results of emotional screening questionnaires that were administered.



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- **Recommendations** – the report will contain recommendations that are based on the neuropsychological findings. These recommendations will vary greatly across individuals with TBI, and the level of specificity of the recommendations will also vary. A close look at this section of the report will likely be very helpful to you in determining the needs of the client as you consider readiness to return to work and job placement issues.

### What areas of functioning are measured in a neuropsychological evaluation?

The neuropsychological assessment is one method by which information on brain functioning is obtained. It involves the administration of various tests that measure: orientation and attention, memory, sensorimotor functioning, language abilities, visuospatial abilities, complex problem-solving, and reasoning. Measures of emotional and behavioral functioning are also typically administered as part of a comprehensive evaluation. Other professionals on the rehabilitation team will also be evaluating sensorimotor, cognitive, and emotional functioning utilizing different tools and approaches. Having multiple approaches to assessment can create a more complete picture of the areas of difficulty and may provide additional observations that are relevant to developing compensation methods and strategies.

- **Orientation and attention:** Orientation is assessed by having the client state the current year, date, day of the week, place, President, etc. Attention is often measured by having the client repeat strings of numbers of increasing length, both in forward and reversed order. Another example of an attention task is having the client rapidly add orally presented numbers. Attention is often impaired in clients who have had moderate to severe injuries.
- **Memory:** Memory for both verbal and nonverbal information is tested, often using the following methods: having the client recall orally presented stories and lists of words immediately and then again after 20-30 minutes; having the client copy geometric designs and then reproduce these designs 30 minutes later; and requiring the client to recognize previously presented words or designs. Memory is frequently impaired in clients who have had moderate to severe injuries.
- **Sensorimotor functioning:** Clients' motor speed, dexterity, strength, and ability to perceive visual and auditory stimuli are often tested. These areas are measured by: having the client tap a key as rapidly as possible; having the client place grooved pegs correctly into slotted holes of varying orientation; having the client squeeze a hand-held device as hard as possible; and having the client indicate when they have



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detected examiner-generated visual movements and sounds on both the right and left sides of the body. After TBI, sensorimotor functioning on one side of the body, or sometimes both sides, can result from brain damage, peripheral injuries, or both.

- **Language:** Assessment of the client's language includes measures of both receptive and expressive language. Receptive language refers to the client's ability to understand speech, whereas expressive language refers to the client's ability to generate speech. Examples of common language tasks include having the client produce the names of drawn objects; repeat sentences of increasing length; answer yes/no questions; point to the drawn object that corresponds to a word/phrase spoken by the examiner; carry out commands given by the examiner that require the manipulation of plastic tokens of different shape, size, and color; and orally generating words beginning with a specified letter of the alphabet or that belong to a specified category (e.g., animals).
- **Visuospatial abilities:** The client's ability to process and make sense of visually presented information is important to measure. Common tasks used to evaluate this construct include having the client: assemble colored blocks to match pictures; make judgments about the spatial relationships of lines; identify an array of shapes or a face that exactly matches an exemplar from among a group of similar foils; and identifying part-whole relationships based on viewing partial components of an object and mentally rotating them to figure out what the object is. Visuospatial abilities are particularly important to measure in persons with TBI because some have difficulties perceiving information on one side of space after their injury.
- **Speed of processing:** The speed at which the client processes information is often slowed after sustaining a TBI. Measuring processing speed is important because it can have implications for helping determine the type of job that the client would be best suited for, and also has broader implications for the ways in which rehabilitation or other healthcare professionals interact with the client. Processing speed is often assessed by having the client perform timed tasks, such as: connecting numbered circles in order; filling in symbols according to a key, and identifying whether a target symbol appears in an array of symbols.
- **Problem-solving and reasoning:** These are complex, high level abilities that are often impaired in persons with moderate to severe injuries. This construct is frequently measured by having the client perform, for example, an unstructured card sorting task



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that requires them to figure out the rules of the test. Other tasks require the client to impose organization on unstructured material and demonstrate mental flexibility in the context of changing conditions.

- **Intellectual functioning:** Intellectual functioning is measured to assess overall level of cognitive functioning. Some clients will be administered a lengthy battery that includes multiple subtests, whereas others will be given selected subtests that are used to estimate overall intellectual functioning. Certain subtests may be given because they are known to be relatively insensitive to brain damage, and thus provide a good estimate of cognitive functioning prior to the injury.
- **Personality/mood:** Some clients undergo a brief screening of mood functioning, whereas others undergo a more comprehensive evaluation of personality and mood. These areas are important to assess because they provide information that will help guide treatment, and it is also important to assess these areas because mood disturbance can affect the client's performance across the neuropsychological tests.

### What can I do when making a referral for neuropsychological evaluation to ensure that I get the information that would be most helpful to addressing the vocational needs of my client?

A referral for formal neuropsychological assessment can be very important because the identification of the type and extent of cognitive difficulties experienced by your client will be important when providing guidance about return to work issues. For example, if the client worked as an office manager prior to injury and wishes to return to this job, but has significant problems with memory, processing speed, and problem-solving, then it is likely that substantial workplace modifications will need to be implemented to help the client compensate for these problems, or, alternatively, job goals will need to be altered. The neuropsychological report should be shared with all healthcare professionals who are working with the client, such as primary care physicians, psychiatrists, vocational counselors, physical therapists, occupational therapists, and speech therapists. This is important because information from the neuropsychological evaluation will have implications for the strategies professionals use when working with the client.

Here are several tips that can help to identify a qualified neuropsychologist and obtain the information that will be most helpful to you as a VR counselor:

- **Ask colleagues, contact local rehabilitation facilities, inquire through national professional organizations, or contact your state Brain Injury Association to**



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**identify neuropsychologists who are qualified to do the evaluation.** If you do not already have a neuropsychologist with whom you have worked before, you will want to do a little research to determine that your referral will go to a qualified professional, ideally with experience in conducting neuropsychological evaluations for clients with TBI.

- **Identify the questions that you would like addressed and provide the list of questions to the evaluating neuropsychologist.** Be sure to provide a list of questions in writing to ensure that the neuropsychologist will address all of your concerns and questions. This list of questions will likely impact various aspects of the evaluation, from the selection of test instrument to the structure of the report, and the recommendations provided. You will want to be very specific to your client's situation, however, some key areas you may want to consider asking include:
  - What are my client's areas of limitation and how might they impact his or her ability to work?
  - How stable are the areas of limitation likely to be?
  - What areas of strength does my client exhibit and how might these be used to assist in compensating for areas of difficulty within the workplace?
  - What are some specific modifications that would be recommended to assist the client in performing aspects of his or her job (i.e., need for additional time, structured rest breaks, personal data assistants to assist with reminders of job tasks or "to do" lists, etc.)?
  - How would factors like fatigue, substance use, pain, etc. impact participation in the work setting?
- **Provide the neuropsychologist with any medical or school records that you may have, with information about the client's specific job or areas of work interest, and/or with a thorough summary regarding your client's history and presenting problems.** Providing information about school performance, pre-injury medical and social history, injury history, and post-injury treatments will facilitate the neuropsychological evaluation process. If you have already performed a job analysis or have detailed information about the types of work tasks that your client may be asked to perform, this will also enhance the quality of the information that the



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neuropsychologist can provide regarding the impact of current strengths and limitations on job functioning. Having this information available will enrich the quality of the resulting report and may increase the speed with which the results can be provided to you, as delays created by requesting records may be avoided.

- **Specify a time frame within which you want to obtain the evaluation results and recommendations.** To ensure that you have the information that you need in a timely manner, be sure to clearly communicate your expectations regarding when you need the results.

[Return to Evaluations](#) or [Continue](#)



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### Functional Capacity Evaluation:

A Functional Capacity Evaluation (FCE) consists of numerous performance-based tests that help to determine an individual's work-related physical capacities and functional abilities. Information from a FCE can be used to determine job placement, need for workplace accommodations, and readiness to return to work following injury or illness. A FCE might also be informative about a person's ability to perform activities of daily living and participate in leisure activities. A FCE is typically carried out by a physical therapist. There are two basic types of functional capacity evaluations<sup>5</sup>:

**General Purpose FCE.** When an individual does not have a specific job to return to or the functional requirements of a job are unknown, a general purpose FCE may be appropriate. A general purpose FCE assesses an individual's ability to perform a variety of physically-demanding work-related activities. Results from a general purpose FCE can be used to assess an individual's compatibility with a specific job once identified.

**Job-specific FCE.** When an individual does have a specific job to return to or the functional requirements of a job are known, a job-specific FCE may be appropriate. Depending on the parameters of job, a job-specific FCE could include representative work samples, assessment of an individual's ability to perform a critical job-task at the work site, etc. Information from this type of evaluation helps to identify the individual's ability to safely perform his or her job duties and if necessary, any potential restrictions that might need to be implemented at the work place.

For in-depth information on FCE's, please visit the American Physical Therapy Association website at [www.apta.org](http://www.apta.org)

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### Driving Evaluation:

Driving ability may affect a client's ability to return to work, participate in educational activities and live independently. Driving evaluations are typically conducted by occupational therapists with specialized training in such evaluation. The primary goal of driving evaluation services is to determine the client's capacity to operate a vehicle independently, in their environment. If areas of challenge are identified, the occupational therapist may recommend behind-the-wheel training and/or vehicle modifications, as needed.

Typically, a return to driving evaluation involves an "in-clinic" evaluation and a subsequent "behind-the-wheel" evaluation. Both evaluations assess the necessary skills for successful driving ability, as well as the need for special equipment and/or training services; however, in-clinic evaluations can be conducted in an office, classroom, or simulator depending on the skills that are being assessed, while behind-the-wheel evaluation involves a motor vehicle. During the in-clinic evaluation, information is often gathered about the individual's ability to perform activities of daily living, medical history (i.e., chronic and acute conditions, current medications, etc), and driving history, including information about the type of vehicle available to the individual, frequency and duration of desired driving times, and previous driving record. Additionally, the individual is administered tests of physical functioning, vision, perception, and cognition during the in-clinic evaluation. The behind-the-wheel assessment evaluates the individual's ability to safely operate a vehicle in various types of traffic and settings. Once the in-clinic and behind-the-wheel assessments are completed, the results and recommendations are discussed with the individual, and when appropriate, his or her family members. Recommendations may include: clearance to return to driving, further training, vehicle modifications and/or adaptive equipment, consultation with an optometrist or ophthalmologist, restrictions on times and duration driving time, or restriction from driving.

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- [Return to the top](#)
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[Return to top](#) or [Continue to Training Session 3b](#)



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