BRAIN INJURY ASSOCIATION OF MICHIGAN

Certification Exam Preparation Course

Chapter 2: Philosophy of Rehabilitation

WEBINAR

Trainer:
Carol Green, OTRL, CBIST, CAPS
Michael O'Connor, OTRL, CBIST

Module Objectives

- Distinguish between historical and contemporary rehabilitation philosophies.
- Describe the philosophical basis of the helping role in rehabilitation.
- Identify styles of interacting between giving and receiving assistance that put contemporary rehabilitation philosophies into practice.

Cultural Devaluation

- In the U.S., the climate for inclusion and full community participation for people with disabilities is still remarkably inconsistent.
- People with disabilities are:
  - Labeled
  - Still readily institutionalized
  - Viewed as a problem for society
  - Seen as an economic burden

Comparison of Paradigms

Interdependence
- Focuses on ***capacities***
- Stresses ***relationships***
- Driven by the person/disability
- Promotes micro/macro change

Medical
- Focuses on ***deficiencies***
- Stresses ***congregation***
- Driven by the expert/professional
- Promotes that the person can be fixed

Inclusion

Inclusion
- The individual is ***incorporated and welcomed*** into the community, regardless of their disability.

Critical Components of Self-Determination

- ***Freedom*** to plan a life with supports rather than purchase or be referred to a particular program.
- ***Authority*** to control a certain sum of dollars to purchase preferred supports.
- ***Support***: Use of resources to arrange formal and informal supports to live within the community.
- ***Responsibility***: Can and should have a role within the community through competitive employment, organizational affiliations, and accountability for spending public dollars in life-enhancing ways.

Interacting with Empathy

- A day in rehabilitation is remarkably different than anything ever experienced before.
  - Participants are poked and prodded, evaluated and observed.
- Having empathy will ***improve*** our interactions
- However, to impact interactions in a noticeable, consistent, and effective way, we must understand mutual ***reinforcement*** and reciprocity

Mutual Reinforcement and Reciprocity

- Mutual reinforcement: an exchange of ***reinforcers*** or ***desired events*** between two or more people.
- Behavioral research suggests that:
  - Human behaviors often develop and continue because of their "***desirable***" effects for the individual who performs them
  - People probably have a tendency to treat others as they are treated

Mutual Reinforcement and Reciprocity

- Ongoing exchange of ***unwanted*** events between people is referred to as a ***negative reciprocal relationship or negative reciprocity.***
- Striving toward the development of mutually reinforcing relationships, or ***positive reciprocity***, may help the person ***achieve greater success*** in rehabilitation and in life.

Promoting Mutually Reinforcing Interactions

Active treatment interaction

- An interaction that is intended to result in ***greater*** independence, autonomy, empowerment, or inclusion for one of those people
- The term is intended to imply directed action, teaching, and a certain degree of risk taking.

PEARL

- ***Positive***: being upbeat, enthusiastic, requesting rather than demanding, actively prompting and encouraging participation.
- ***Early***: being proactive when difficult or troubling situations arise, intervening early to facilitate problem solving, and interrupting or redirecting behavioral consequences that could lead to more serious problems.
- ***All***: acting these ways all the time, with all participants, and in all daily situations.
- ***Reinforce***: consistently recognizing, acknowledging, and socially reinforcing participant accomplishments.
- ***Look***: looking for situations or opportunities to facilitate independence, autonomy, empowerment, or inclusion.

No Blame!

- Each individual is predisposed to act in particular ways in particular situations.
- Predispositions include all the medical, cognitive, physical, biochemical, and environmental factors that influence actions in a given situation.

If people are ***predisposed*** to behave in certain ways in certain situations, then holding them ***at fault*** or blame for unwanted actions does not make good sense.

Can vs. Can't

- Encourage inclusion.
- Think that the person ***can*** vs. can't do something.
- Consider what is possible (instead of what might possibly happen) and the potential benefit of *doing* rather than preventing.
- Find ways to support a ***person's interests***, rather than ignoring them or constantly refusing requests.
- This approach increases ***mutually desired actions***.

Outcome Oriented Model

- Designed to identify ***areas of agreement*** between people that are related to the goals of their assistance
- Without clear and meaningful ***goals***, individuals often just "do what they do" without considering what others are attempting to accomplish.
- ***Partnerships*** are needed between rehabilitation professionals, between professionals and paraprofessionals, between professionals and family members, and with the person who has sustained the injury.

BRAIN INJURY ASSOCIATION OF MICHIGAN

Certification Exam Preparation Course
Chapter 5: Understanding and Treating Functional Impacts of Brain Injury

WEBINAR

Trainer:
Carol Green, OTRL, CBIST, CAPS
Michael O'Connor, OTRL, CBIST

Module Objectives

- Describe common cognitive, physical, emotional, behavioral, and social changes after brain injury.
- Describe how these changes affect the person's functioning.
- Describe the outcome-driven rehabilitation process.
- Describe and give examples of three environmental influences on behavior.
- Describe active treatment planning.

Introduction

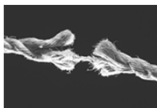
- There may be many changes in how a person thinks, feels, and acts after a brain injury.
- Cognitive, physical, behavioral and emotional changes can greatly affect a person's ability to live independently.
- These changes can affect virtually every aspect of a person's daily existence.
- Most people who have survived brain injury have impairments in several areas, which complicate living independently, working, and relationships with others.
- Changes in ***behavior*** after brain injury presents special difficulties.

Functional Impact

- Cognitive impairments can affect activities of daily living
- ***Memory problems*** are considered to be the most disabling consequence of brain injury
- ***Executive functioning*** refers to the ability to plan, initiate, direct, and monitor one's activities and are often impacted
  - With impaired executive functioning, a person may not respond to stimulation from the environment in the same way as before a brain injury
- ***Initiation problems*** may result in a person failing to engage in an important activity unless prompted repeatedly.

Changes in Thinking

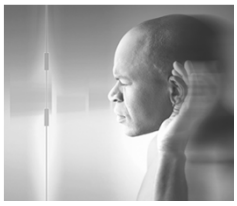
- Lack of awareness of deficits (***anosognosia***)
- Confusion about who one is, where one is, and the time (disorientation to person, place, and time)
- Distractibility
- Reduced ability to pay attention
- Difficulty with changes in routine
- Difficulty with basic calculations
- Difficulty with sequencing



Changes in Thinking *continued*

- Impaired ability to evaluate what is important versus trivial
- Relating information or events believed to be true, that have not happened
- Impaired ability to think abstractly
- Perseverative verbal behavior
- Difficulty understanding cause and effect
- Impaired safety awareness
- Lack of empathy
- Poor insight

Speech and Language Impairments



- Speech and language problems can be either ***Receptive*** (the ability to understand others) or ***Expressive*** (the ability to express oneself to others)
- Common Deficits:
  - Impaired word-finding abilities
  - Repetition of words or phrases
  - Disorganized spoken or written communication
  - Incomplete or incoherent expression of thoughts

Sensorimotor Impairments *continued*

- Decreased muscle tone (***flaccidity***)
- Paralysis of one or more limbs
- ***Paresis*** (weakness) in one or more limbs
- Balance problems
- Coordination problems (***ataxia***)
- Difficulty planning muscle movements (***apraxia***)
- Decreased endurance
- Increased muscle tone (***spasticity***)

Sensorimotor Impairments *continued*

- Vision problems
  - Depth perception
  - Involuntary eye movements (***nystagmus***)
  - Increased sensitivity to light (***photophobia***)
- Swallowing difficulties (***dysphagia***)
- Impaired hearing
  - Ringing in ear (tinnitus)
  - Increased sensitivity to sound (sonophobial)
- Impaired taste
- Impaired ability to smell (***anosmia***)
- Chronic pain
- Increased sensitivity to touch (tactile defensiveness)

Behavioral and Emotional Changes

- Delayed or unresponsiveness to requests
- Aggression
- Property destruction
- Depression
- Yelling and angry outbursts
- Self-injurious behavior
- Decreased frustration tolerance
- Impulsivity
- Decreased sensitivity to others
- Paranoia
- Inappropriate sexual behavior
- Hyperactivity
- Immature self-focused behavior
- Hoarding
- ***Emotional swings*** (affective lability)

Substance Abuse

Immediate or delayed substance abuse can be related to any of the following factors:

- Re-involvement with friends who misuse substances
- Denial that substance abuse is a problem
- Poor coping strategies
- Limited therapeutic recreation outlets
- Limited vocational opportunities
- Pre-injury pattern of use of abuse
- Increase access
- Depression and isolation
- Increased awareness of limitations

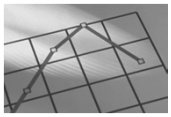
Outcome-Driven Rehabilitation

- Treatment must be planned and provided within the framework of a systematic process.
- Results must be evaluated on the basis of specific ***outcome criteria***.
- These outcome criteria are expressed in the form of therapeutic or life ***goals***.
- Identifying outcome criteria is a critical step.

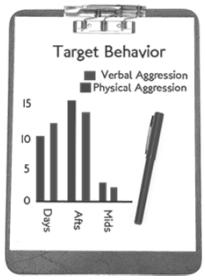
Outcome Measures

- Once assessments are done, the next step is to identify exactly what skills are needed for each desired outcome.
- In general, each outcome will have one or more ***goals***.
- Each and every goal will have ***behavioral*** objectives.

- ***Outcomes*** describe what performance is expected for success in the discharge site.
- ***Goals*** break the general outcome criterion down into more specific activities.
- ***Objectives*** further break down the goals into observable and measurable performance criteria that are taught in order.



Evaluation of Outcomes



- Evaluation of ***treatment effects*** is a critical aspect of outcome-driven rehabilitation.
- Behavioral assessment:
  - Determines environmental factors that maintain the behavior
    - A-B-C assessment
  - Evaluates the effects of behavioral interventions
- Knowing what factors contribute to a behavior's occurrence is critical for understanding and treating behaviors.

Common Measures of Behavior and Performance

- ***Frequency***: number of times that a skill or behavior is observed to occur
- ***Rate***: number of times that a behavior occurs in a specified time period
- ***Duration***: length of time that a behavior occurs
- ***Latency***: length of time that it takes a person to initiate a behavior
- ***Magnitude***: the intensity of a behavior
- ***Percent of opportunities***: number of correct responses per opportunities to respond, times 100. It is used to determine responding when the opportunities to respond vary.

Steps to Treatment Planning

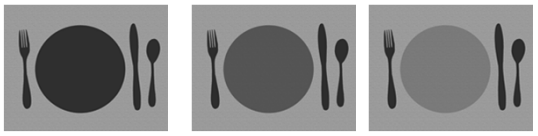
- Assess neuropsychological factors.
- Collect ***baseline*** data.
- Assess ***environmental*** influences (antecedents and consequences).
- Identify ***positive reinforcers*** to motivate and reward the individual.

Behavioral Treatment Methods to Increase Adaptive Skills

- ***Task Analysis***
  - The overall skill is analyzed into components that can be taught and measured.
- ***Shaping***
  - Reinforcement is provided only when a person gets progressively closer to the ultimate target behavior.

Behavioral Treatment Methods to Increase Adaptive Skills

- ***Fading***
  - A gradual change from artificial to more natural cueing stimuli.
- ***Incidental Teaching***
  - Many of the interactions between staff and individuals with brain injuries occur outside the structured program.



Role of the Brain Injury Specialist in Treatment Planning

Brain injury specialists are more likely to see individuals' daily difficulties and frustrations as they undergo rehabilitation because they spend time with individuals under the more natural conditions than other team members.

General Guidelines for Treatment Planning

- ***Person-centered***: Include the individual as much as possible, in the development and design of the treatment plan.
- ***Supportive***: Design a plan that makes it very likely the individual will succeed.
- ***Simplicity***: Make the plan easy for staff and the individual to understand.
- ***Consistency***: Implement the plan consistently.
- ***Flexibility***: Make the plan flexible enough to adapt to changes in the individual.

Interaction Guidelines

- Positive: Only discuss the person's successes when the person is nearby.
- Treat everyone with dignity and respect: The most effective staff are those who treat people as unique individuals.
- Don't talk down to people: Persons in rehabilitation are people like you and I.
- Stay calm: It is most effective to stay calm during crisis situations.
- Don't take things personally.
- Avoid arguments: Little good comes from arguments.
- Maintain a sense of humor.

Understanding Behavior

- Human behavior is complex.
- Behavior is lawful and occurs for specific reasons.
- Behavior is controlled by the ***human nervous system*** and the ***environment***.
- When brain functioning is altered by an injury, behavior can change.
- Altered behavior occurs as a result of ***brain injury*** and is further affected by environmental influences.

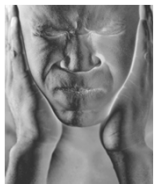
Neurologic Influences on Behavior

- When the brain is injured, the ability to ***perform*** certain tasks can be affected as can the ability to ***control*** unwanted behaviors.
- Damage to the ***limbic system***, or ***temporal lobes***, is often associated with aggression and other emotional responses.
- Damage to the ***frontal lobe*** can also result in inappropriate and emotional responding, as well as disinhibition.
- Problems with arousal and lethargy can be related to injury to the ***brain stem***.

Environmental Influences on Behavior

The environment consists of everything in an individual's immediate surroundings that can affect his/her behavior:

- People
- Stimuli
- Sounds
- Temperature
- Smells
- Lighting



Environmental Factors that Increase Behavior

General Behavioral Principles

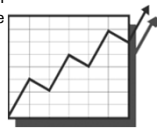
Behavior will Increase	Behavior will Decrease
Reward (stimulus applied)	Extinction (stimulus removed)
Escape & Avoidance (stimulus removed)	Punishment (stimulus applied)

Environmental Factors that Increase Behavior

Rewards (positive reinforcement)

- Person receives preferred items, events, attention, etc., by behaving in a certain manner. Result: the behavior is strengthened or reinforced and more likely to be repeated in the future.

Likelihood of Behavior Increasing



Escape & Avoidance (negative reinforcement)

- Person avoids or escapes an unpleasant situation by behaving in a certain manner. Result: the behavior is strengthened or reinforced and more likely to be repeated in the future.

Treatment Planning for Unwanted Behavior

- Operationally define the behavior in objective and measurable terms.
- Establish a baseline level of the behavior.
- Assess the environmental variables that maintain the behavior.
- Identify specific methods for ***decreasing*** occurrences of the behavior.
- ***Reinforce*** desirable behaviors that can replace the unwanted behavior.
- Continue to evaluate the behavior's occurrence.
- Revise the plan as necessary.

General Guidelines

- Emphasize strategies that teach ***self-management*** of unwanted behaviors.
- Use ***least restrictive*** methods when at all possible. Use more restrictive measures only after lesser methods have proved ineffective.
- Use the plan to teach ***adaptive*** behaviors that replace unwanted behaviors.
- Carry out treatment for behavior problems in all therapeutic contexts.
- Always attempt to be pleasant and positive when interacting with the individual

Treating Substance Abuse

- Traditional treatment strategies often do not work with people with cognitive impairments after brain injury
- Critical elements for effectively treating substance abuse after brain injury include:
  - ***Trained substance abuse counselors*** as part of the trans-disciplinary team
  - Comprehensive assessment of substance abuse upon entry to a program
  - Team should recognize the stages of readiness and willingness to commit to a sober lifestyle
  - ***Family*** involvement and group therapy are necessary for recovery
  - ***Relapse*** should be viewed as part of the recovery process, not as a failure

General Components of Effective Programming *continued*

- These are the areas most likely to affect the success of treatment planning:
  - Memory: Forgetting critical events, appointments, or medications.
  - Executive Functioning: Poor planning, initiation, and attention
  - Language: Poor speech, articulation, etc.
  - Aggression, verbal outbursts, social skills
  - Employment: Difficulty recalling job, anxiety, etc.
  - Activities of daily living

General Components of Effective Programming *continued*

- Daily planner
  - Treatment plans should include using a daily planner.
- Redirection
  - Redirect the person away from whatever is causing the ***unwanted behavior***.
  - Changing the focus from the cause of agitation usually results in ***reducing*** agitated behavior.
  - Depending on the individual, it is often therapeutic to discuss the origin of an agitated episode after the person has calmed down.