Cognitive Rehabilitation in Clinical Practice

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What do we mean by cognitive rehabilitation?

- Treatments designed to improve deficits in thinking caused by brain dysfunction.
- Requires thorough understanding of the nature of cognitive functions: domains, processes, features, hierarchies, explicit vs implicit, modifiable components and effects of personality, emotions, sensory motor limitations, coping, pre-morbid + and - , family dynamics on pt function.
Other interventions: Value of traditional rehabilitation

- Moves quickly to target and treat physical and functional problems
- Focuses upon fundamental obstacles to basic functions, e.g., speak, swallow, walk, write, self-care, chores, safety, home function
- Coordination of treatment efforts among or between therapists may not be as essential, e.g., complex cognitive and behavioral problems are not paramount
Limitations of traditional rehab

- Higher level problems in thinking and behavior may not be fully understood or systematically addressed
- Lack of integration of treatment plans, goals and methods across clinicians can limit some patients’ progress
- Patients with acquired brain injury/illness need well-organized, appropriate and consistent interventions to maximize benefit
- Clinicians need feedback about their own behavior, effectiveness, limitations
Component approaches to CRT versus Holistic Models

- Depending on patient and circumstance, Cognitive Rehab Treatment alone can be very effective.
- Targets specific cognitive obstacles to performance, e.g., need for organization.
- Provides strategies, coaching, support for improved function in real world.
- Fades according to plan, with periodic booster or re-check sessions.
When would the component approach to CRT be used?

- Patient making good recovery, aware, willing to use strategies
- Patient back to work or school but in trouble due to a particular deficit
- Patient very impaired and very early in recovery, needs limited, focused support or would be overwhelmed
- Patients who need periodic “booster” sessions at major life transition points
A quick overview of treatment terms

- Traditional individual tx, e.g., OT, PT
- Components of Cog Rehab Treatment (part-time holistic)
- Comprehensive, holistic CRT approach - full interdisciplinary team
- Milieu-based approach to comprehensive, holistic CRT program
An epidemiological reminder regarding outcome > Sev TBI

- Approximately +1/3 patients (most from less severely injured groups) get back to some kind of work after traditional rehab
- Some patients (10-15%) too severely injured to work; most have potential for meaningful outcome improvement, but face major cognitive, behavioral, ADL, emotional, physical, vocational, medical, family, employer, community barriers
What is Holistic approach to Cognitive Rehabilitation?

- Interdisciplinary teams of clinicians are essential to comprehensive holistic care
  - Neuropsychologists, OT, PT, SP, VOC, Rehab Psychologists, MSW, TR, MD with ABI expertise
- Psychotherapeutic interventions are a key component of holistic programs
- All clinicians are open to constructive criticism from patients, families, team
- Holistic programs often led by Clinical Neuro-psychologists due to complex role of cognitive, behavioral and personality factors in outcome
Why do we need holistic approaches?

- People with serious acquired brain injury can experience significant alterations in thinking, communication, emotions, behavior, sense of self, family roles, work, leisure, social life, physical appearance, sensory functions.
- Profound impact on family and quality of life.
- Reduced awareness of deficits is common.
- Problems with acceptance occur.
- Difficult for patients with ABI to chart a realistic course to recovery.
- Problems with generalization of clinic gains.
Some tenets of holistic outpatient neuro-rehabilitation

- Medically stable patients*
- Effective strategies are necessary but not sufficient for behavior change; skilled therapists are the primary agents of change
- Therapeutic alliance is critical to improvement
- Patients need to be aware of their residual strengths and weaknesses
- Treatment starts with a few key areas of difficulty important to patient, family and team
- Individual, couple, group and family treatment formats are employed as appropriate
Medical needs of the medically stable patient

- Rehabilitation medicine needs are common
- Pain management
- Visual disturbances
- Musculoskeletal injuries
- Sleep disturbances, insomnia
- Mood disorders that merit medications
- Severe TBI with spasticity, contractures
- Chronic severe TBI with later onset dystonia
More tenets of holistic Cognitive Rehabilitation

- Primary treatment areas are developed for each patient and evolve over time & progress, e.g., memory problems, irritability, balance.
- All therapists know the primary treatment areas and recommended strategies even if it is not their own discipline’s domain and they reinforce the patient’s use of the strategies.
- Whether restoration and/or compensation, thinking and behavior can be improved, including maintenance and generalization, via individual, group, job station, family treatment.
How it works: further features

- Independent use of strategies is trialed and observed in the clinic setting
- There is extension of clinic-based strategies to the patient’s home, work and community
- Homework assignments are on-going
- Family feedback is essential
- On-going discussions with employer with patient’s permission and involvement
- Partnering with sophisticated community-based neuro-rehab teams a key add-on
Challenges of the Holistic Comprehensive Models

- It is intensive and complex treatment
- Not all patients, staff or families can tolerate it nor is this model appropriate for everyone
- It is time-consuming for clinicians to coordinate/update patients’ care plans
- It requires high levels of psychological maturity and awareness in clinicians
- It is challenging to provide fully in hospital-based outpatient settings with lack of space or program coordination support and lack of CRT reimbursement for speech therapists’ tx
Why should we bother?

- Only +1/3 patients with TBI/ABI return to work/school/independence after traditional outpatient rehab tx
- Cognitive, emotional, behavioral problems are major barriers for +2/3 patients
- Long-term outcome statistics (10+ yrs) are among the highest (Klonoff, et al) with milieu-based programs (75%)
- Better outcomes for patients is associated with reduced morbidity for family members
More reasons to bother with comprehensive Neuro-Rehab:

- Group treatments provide vital chances to practice pro-social behavior in a skilled therapeutic environment.
- Corrective emotional experiences can occur more frequently in such settings where the therapists know each patients’ struggles and patients get to know each other.
- Weekly milieu meetings with patients and staff and/or group therapies allow patients to observe staff modeling ways to give and receive feedback.
Even more reasons to bother with comprehensive treatment

- Vocational strengths & problems noted from outset and incorporated into treatment plan
- Employers or schools included early in RTW or school process so are part of solutions
- Two best predictors of return to employment after injury are 1) be within one year of injury at time of return; 2) a supportive supervisor, so an early alliance is critical when possible
- Family members are included in periodic sessions to learn and provide feedback
Extended Access and Support in the Holistic Model

- Young adults with childhood severe TBI transitioning to adult care with new needs
- Monthly treatment groups for long-term follow-up and prophylactic care
- Patients for whom the first round of treatment was partially but not fully successful, e.g., drug and alcohol abuse problems, personality disorders, family dysfunction effects
- Initial bolus of intensive, informed care lays foundation for future further improvements
- Literature is clear on positive effects of cognitive rehabilitation as a key component of care for patients with TBI
What characterizes functional recovery after TBI?

- “The ability to work, love and play”
- Independent as possible in ADLs
- Use of compensatory techniques
- Realistic view of abilities and difficulties
- Involvement in productive activity, e.g., work, school, homemaking, volunteer
- Reduction in behavioral problems
- Reduction in caregiver stress/health problems
- Reduced overuse of medical care
Who are the clinicians and how are they credentialed?

- Speech language pathologists, occupational therapists, neuropsychologist with cognitive function specialty who can design and/or implement treatment, and revise as appropriate

- Certified assistants (COTA) or rehabilitation specialists to carry out, but not design, tx plan, who are supervised by speech therapist, occupational therapist, or neuropsychologist, as appropriate
Why is it difficult to provide in some health care settings?

- Traditional view of rehab: focus on focal problem, divide/conquer/compete by discipline
- Team therapists can be “pulled” by their supervisors to take care of acute hospital pts
- The milieu model is not a medical model - extensive built-in support for MD practices (RN, MA, PA, ARNP, clinic staff), but not for PhD Directors or Neuro-Rehab/CRT teams
- Speech therapists are often not reimbursed for CRT, a primary area of their expertise
- Funding for clinical coordination is a problem