Overview and a Business Case for CET

CiMH EBP Conference

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Center for Cognition and Recovery
2011 SAMHSA Science & Service Award
www.cetcleveland.org
CET is an active treatment that changes our clients’ brains:

- To have **increased** capacity to learn
- To **remember** what they learn
- To act in **real time**
- To **improve** their social cognition
- To act **wisely** in novel social and vocational situations
- To have **hope**
Negative Symptoms Of Schizophrenia

- Flat or blunted emotion
- Lack of motivation or energy, often on Auto Pilot
- Limited or impoverished speech
- Lack of pleasure or interest in things

Cognitive difficulties are also usually present:
- Slow thinking process
- Concrete thinking
- Poor concentration and memory
- Difficulty understanding or expressing feelings
- Difficulty integrating thoughts, feelings and behaviors
Components of CET

1. Specialized computer exercises done in pairs
2. Homework reporting in class, no one can hide
3. Weekly Psycho-ed talks
4. Cognitive Group Exercises done in pairs
5. Individual ‘coaching’ once a week
Ray Gonzalez, ACSW Disclosures

- Executive Director of The Center for Cognition and Recovery (CCR) a nonprofit LLC, division of JFSA of Cleveland

- The CCR has received grants from The Cleveland, Morgan, Mount Sinai Health Care and Woodruff Foundations for the development and dissemination of CET

- OSU School of Social Work grad with 37 years as psychiatric social worker; Optimist; 13 years working with CET; co-lead 4 CET Groups
What is CET?

CET is an Active Treatment works to remediate the brain

For stable clients who have plateaued but have not fully recovered

Combination of specialized computer exercises, social cognition groups and individual coaching

Utilizes a coaching methodology

48 once-a-week sessions

- 80 to 90% attendance rate
- 85% graduation rate
History of CET

- Developed by Gerard Hogarty and Samuel Flesher at the EPICS Program at the University of Pittsburgh Medical School

- CET Research funded by NIMH grant

- 121 Subjects CET (N=67) or EST (N=54) and treated for two years, between January 1995 and February 2002

- Initial study published in the Archives of General Psychiatry, Sept. 2004 & a study on the Neuroprotective Effects of CET Against Gray Matter Loss in Early Schizophrenia also in the Archives of General Psychiatry, May, 2010

- Additional CET studies published on durability 12/06, 11/09; for persons in early psychosis 11/09, all in Psychiatry Services
Effect Sizes of CET & EST (Enriched Supportive Therapy) at 12 and 24 Months by Composite Index

Hogarty, Flesher--Archives of General Psychiatry, Sept. 2004
Cognitive remediation is based on Neuroplasticity

- Neuroplasticity refers to the brain’s ability to re-organize itself through forming new neural connections or by adding cells.

- Neuroplasticity allows the neurons in the brain to adjust their activity and organization in response to new situations or to changes in the environment.
Environmental enrichment leads to neuronal proliferation

by permission of M. Keshavan, MD
CET Improves

- Social cognition (the awareness to interact wisely with others)
- Processing speed (enables timely responses)
- Cognitive functioning (attention, memory, problem solving)
- Meaningful roles (employment, student, volunteer, care giver, friend)
- Self-management of mental and physical health
- Acceptance of and adjustment to disability

SOCIAL LIFE VIDEO CLIP
Goals of CET by permission of S. Eack, Ph.D., Univ of Pittsburgh

Foster Higher Thinking By Becoming:

Abstract and Gistful vs. Concrete

An Active Thinker vs. Passive Receiver of Information

Cognitively Flexible vs. Following Rigid Rules

More Spontaneous vs. Rehearsed

More of an Initiator vs. Doing Nothing
Attention, Memory, Problem Solving

- **Attention:**
  - Establish set
  - Maintain set
  - Shift set

- **Memory**
  - Recall, recognition, procedural
  - *Working Memory* is most impaired in mental illness

- Problem Solving
Coaching Methodology

- Support
- Challenge
- Be Permissive
- Reward
Motivational Account

What is a Motivational Account

- Explain Yourself
  - Your actions
  - Your ideas

- Tailor Your Explanation to Your Audience

Before Doing Something Stop and Think:

- Can you explain what you are doing or are about to do?

- Who is your audience?

- What is the context?

- Is your explanation acceptable and credible?

Your Perspective

+ Perspective of Your Audience

Motivational Account
"White Bread"

25 Words

Sort into five categories (five words each) and then again into another five categories.

motor, Francine, Tom, Wednesday, Martha

Tracy, Wind, salsa, Monday, Thursday

windshield, Fred, Sam, front end, Sue

Wally, milk, white bread, fish, spark plug

tomato, Sunday, Friday, tire
CET Attendance & Graduation Rates

- Average attendance and graduation rates are 85-90% across all sites.
- Much of the attendance success can be attributed to how much participants value the program.
  - “I like coming to CET because they treat me like I have a brain”
  - “We feel that we got our son back after he went through CET.” Marty and Gerry Conway, parents of PLAN Member Neil.
  - “CET was invaluable, I learned to laugh again and it brought out the happy side of me”
Business Case for CET for Clients

- CET is Active Treatment vs. TAU (Treatment As Usual) i.e. maintenance services/treatment that is focusing on keeping clients safe, out of the hospital but is not working to change the course of the illnesses.

- Clients are able to experience real successes while in CET and afterwards. Durability of CET demonstrated in research at 3 years and observationally at 12-15 years.
**Results:**
The total mean score of the variable time significantly decreased from the pre to post ($p<.001$). 72.0% of the clients decreased their variable time ($N=93$).

The total mean score of the constant time significantly decreased from the pre to post ($p<.001$). 79.7% of the clients decreased their constant time ($N=74$).

The reaction time for the normative population is 215.

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*Significant change
Var: Variable ($N=93$)
Con: Constant ($N=74$)
Business Case for CET for Clients

- Increased Social and Vocational Capacity
  - Improved Processing Speed and Increased Working Memory enables Clients to process information in Real Time
  - Clients learn how society works
  - Clients are taught that there are others’ perspectives, that there are cultural norms in vocational settings and how to deal with them
  - Clients learn how to interact wisely with others
  - A major goal of CET is to enable Clients not only to get jobs but be able to keep their jobs long term
CET is a **One Time Treatment** given over 48 once-a-week sessions. Although there is a Post CET Program, 95% of the clients do not want to participate in it.

Families are able to reconnect
- “I feel like I have my son/daughter back"
- He is able to participate in our family again
- She is much more independent and wants to work”
CET For Chronic Schizophrenia: Lasting Effects ($N = 106$)

Ways CET benefits clients

- Attention
- Memory
- Motivation
- Affect
- Awareness of social context
- Vocational effectiveness
- Interpersonal effectiveness
- Active Thinking
- Awareness of illness/disability
- Dependability
- Spontaneity
- Foresightfulness
- Perspective Taking
- Cognitive Flexibility
- Mental Stamina
Effects of CET on Employment Outcomes in Early Schizophrenia; Eack, et al

<table>
<thead>
<tr>
<th>Variable</th>
<th>CET (N = 24)</th>
<th>EST (N = 22)</th>
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<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
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<tr>
<td>Competitively employed</td>
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<td>54</td>
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<td>Part time</td>
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<td>Employment pattern</td>
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<tr>
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<td>Job category(^a)</td>
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<tr>
<td>Clerical/sales</td>
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<td>Skilled manual labor</td>
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<td>5</td>
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<td>Unskilled labor</td>
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<tr>
<td>Weekly earnings</td>
<td>207.92</td>
<td>337.97</td>
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<tr>
<td>Satisfaction with employment status(^b)</td>
<td>2.46</td>
<td>1.56</td>
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Business Case for CET for the Agency: Ensure the Provision of Effective Services

- Creates a Person-Centered Culture by providing CET, a treatment that is tailored to address the individual’s cognitive disabilities to help them more fully recover from their mental illnesses. “I like coming to CET because they treat me like I have a brain.”

- CET is a state-of-the-art cognitive remediation treatment that is recognized by SAMHSA and the research community as an Evidence Based Practice (EBP)
Your organization will be viewed as an innovator by your clients, their families and your funders for utilizing CET and thus become the service provider of choice.

Distinguishes your agency from other providers in your area and increases referrals.
Business Case for CET for the Agency

- CET Works on the Similar Cognitive Deficits Found in Most Chronic Mental Illness/Disabilities:
  - Schizophrenia
  - Bipolar Disorder
  - Chronic Depression
  - Autism Spectrum Disorder
Business Case for CET for the Agency

CET Works on the common impairments of:
- Attention/Distractibility
- Processing Speed
- Working Memory
- Executive Functioning
- And in Social Cognition Deficits, e.g.
  - Inability to take others’ perspectives
  - How to function wisely in novel social and vocational situations
Business Case for CET for the Agency

- Impact on Services
  - Average national attendance and graduation rates (from more than 144 completed CET year-long cycles of 48 once-a-week group) of 80 to 85%
  - Results in increased attendance and productivity for CET groups and for other groups/services post CET graduation
Business Case for CET for the Agency

- Reduces need for urgent, high demand services e.g. InterAct of Michigan saw
  - Reduction of 156 hospital bed days for the 19 CET Graduates from the year prior to CET
  - to 10 bed days for the CET treatment year
  - to 0 bed days for the 2 months after graduation, (data as of 2/19/14)

- Other agencies report similar experiences of reduced demand for urgent services
Business Case for CET for the Agency

- Health Homes: CET increases the clients’ capacity to be better physical health patients due to their increased cognitive functioning and follow thru.

- Increases the clinical effectiveness of CET trained staff to be able to see clients’ disabilities in an entirely new and more accurate fashion.
Business Case for CET for the Agency

- Gives CET trained staff new therapy tools to work with their clients both in CET and with non-CET clients

- Changes the focus of the agency to be more rehabilitation oriented, more active treatment oriented than TAU
Business Case for CET for the Agency

- Clients will come to your agency to get CET treatment and then attend more groups after graduating from CET (research based)

- By being a certified CET site, your agency will be part of the Community of Treatment that the Center for Cognition and Recovery has developed (29 sites in 10 states; 5 scheduled to start within 6 months; 9 in development)
Business Case for CET for Funders

- CET can demonstrate a significant ROI for funders, especially foundations.
- Ongoing funding for CET can be provided by Medicaid, Medicare or other third-party payments or private pay.
- Clients and their families become more involved in your agency and are likely to contribute more as they are successful in CET
Funders are asking, “If the treatment is not an EBP, then why are you providing that treatment?”

Initial funding for being trained in CET can be provided by foundations; we have successful grant proposals that we can share with our dissemination partners.
Business Case for CET for Funders

- For ongoing support CET sites have billed Medicaid, Medicare, other third party insurances and private pay

- Initial CET Support from 2000 through February 2014 provided by
  - Foundations for 8 sites
  - Foundations and own funding for 2 sites
  - Own funding for 5 sites
  - Federal, State or County funding for 14 sites
Agencies that have trained staff

- Center for Cognition and Recovery, Cleveland
- Mercy Behavioral Health, Pittsburgh
- Community Support Services, Akron
- Jewish Family Services (JFSA), Cleveland
- PLAN of Southwest Ohio, Cincinnati
- Northcoast Behavioral Healthcare, Ohio DMH
- PLAN of North Texas, Dallas Texas
- West Virginia University Hospitals, Morgantown W VA
- City Mission of Washington, PA
- JEVS, Philadelphia PA
- JF&CS of St. Louis MO
- Bridgehaven MHS, Louisville KY
- LACDMH, Los Angeles, CA
- Tri City MHS, Pomona, CA
- InterAct Michigan, Kalamazoo, MI
144 CET groups completed as of January-2014 with 1,025 CET Graduates

47 CET groups currently running


11 new CET sites in development in CA, NJ, IN, KS, MI, OH, OR, PA, VA, WA
Center for Cognition and Recovery

2011 SAMSHA
Science and Service Award

Treatment of Mental Illness and Recovery Support Services