brain games

enriching life skills through cognitive enhancement therapy

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agenda

- intro to CET & implementation
- brain games
- social groups
- clinician training
- reimbursement
part I: intro to CET & implementation
CET facilitates the process of acquiring social wisdom and enhancing neurocognition.

cognitive enhancement therapy (CET)

- SAMHSA recognized Evidence Based Practice
- helps individuals recovering from schizophrenia and other major mental disabilities
- improve their processing speed, cognition (attention, memory, and problem-solving)
- implications for becoming socially wise and vocationally effective
evidence for CET

• CET has an extensive research base with individuals with multiple psychiatric conditions.
• designed as a one-time treatment that results in improved functioning continuing after graduation
• has been tested in First Episode Programs and with children and adults
• data suggests that CET is most effective when given in the broader context of psychosocial rehabilitation
70-90% average attendance rate

80-85% graduation rate from CET program
rationale for CET

- there are effective medications to control the positive symptoms of mental illness
- however, many individuals still suffer from cognitive impairments that limits their functional, social, and vocational skills
- cognitive domains most impacted in schizophrenia include memory, attention, reasoning, problem-solving, and social cognition
cognitive impairment is a core feature of schizophrenia – strongly related to functioning in areas such as work, social relationships, and independent living

CET engages the participant in a learning activity to enhance the neurocognitive skills relevant to overall recovery goals.

cognitive drills enhance cognitive functioning
cognitive functioning is a robust predictor of response to psychiatric rehabilitation including outcomes such as work, social skills, and self-care.

neuroplasticity & CET

• alterations in neuroplasticity are hypothesized to underpin cognitive deficits
• neuroplasticity may offer an avenue towards cognitive remediation
• principles to consider in designing remediation interventions:
  o ensuring sufficient intensity and duration of remediation programs,
  o "bottom-up" training that proceeds from simple to complex cognitive processes,
  o individual tailoring of remediation regimens
what does it do?

CET is designed to improve neurocognitive abilities such as:

- attention,
- working memory,
- cognitive flexibility
- planning, and
- executive functioning

_all of which lead to improved social and vocational functioning_
implementation

- individual therapy
- social cognition & computer exercises
- social groups
part II: brain games
cognitive enhancement training

• planned exercises to push demands of a patient’s cognitive skills
  o improves upon existing skills
  o helps to acquire new skill sets

what do you see?
how do computer exercises fit?
does training improve social skills?
what do the exercises do?

increase mental stamina
exercises

• each task has approximately 15 exercises
  o each exercise has 3-4 levels

• mastery of the required skill in order to graduate to the next level
  o 3 consecutive passes at a given level
attention skills

- exercises range from simple, focused attention to complex, multiple simultaneous attention with stimulus discrimination and differential response requirements
- speed, accuracy, and consistency are measured

executive skills

range from simple concept formation to complex sequencing, organizing, and multiple simultaneous mental operations
memory

• series of memory skills training exercises that address different avenues and modalities of information intake, storage, and recall
• learn and practice different techniques of compensation as well as the direct improvement of memory skills through better attention and executive skills

visuospatial skills

visual intake and processing skills ranging from simple perception of luminosity to line, angle, shape and motion detection and analysis

problem solving

• focus on information intake, information analysis, inductive and deductive reasoning, and solution development.

• learn and practice different techniques of data analysis and problem solving.

communication skills

learn and practice skills involved in communication and speech/language functioning ranging from auditory attention, perception, processing, comprehension, and expression.

prescription of exercises

• recommend to conduct therapy in Automated Mode
  – cycles through the tasks vs completing one task at a time
    • patients want to focus on what they like and avoid their weaknesses
    • skills learned from the completion of one exercise in one task will be used in the successful completion of other exercises in other tasks
• can make a custom exercise list
• or complete exercises randomly
everyday conversation

• sports or hobbies
• talking about coworkers
• news and local events
• books and TV shows
result of building skills

concentration → reaction → speed

... → friends
“One must keep in mind that cognitive rehabilitation is not a process that can occur overnight, even when one is using high tech software and computers.”
set-up to utilize Neuropsychoonline

• who will work with the patient?

• where do you do the work?
coaching

• important to go through the same experience as the patient
  – gain empathy

  – learn or reinforce skills that have to be taught to the client
a note about coaching

It’s nice when someone remembers every little detail about you, not because you keep reminding them but because they actually pay attention.
therapist vs. peer coach

• at minimum recommend therapists as coaches as they are better suited to:
  – help keep patient on task
  – help understand tasks and exercises
  – help patient make gradual, reasonable changes
  – help process feelings of frustration
  – provide supportive feedback vs confrontational feedback
  – model positive interactions that may not happen with peer coaches
  – better understanding/tolerance for differing patient cognitive styles
optimal physical setup

• need to have adequate quiet space to work on the cognitive exercises
  – exercises put increased cognitive demands that can lead to frustration in a distracting environment

• need to have the correct technical equipment
  – speakers to have appropriate sound discrimination on auditory attention skill exercises
  – big enough screens to adequately see stimulus material
  – patients need to have access to a home/community computer to practice
practice with exercises

*can I have a volunteer?*
You will be presented with a display of thirty pictures. When you click to start the screen will clear and then present some of the pictures for a few seconds for you to memorize. Afterwards, all thirty pictures will reappear. You must click on the pictures you memorized. A yellow circle will appear on the pictures you select. When you have selected all the pictures you can recall then click on the "Done" button. The computer will score your selections by placing a check mark on correct choices or an x mark on wrong choices and pictures you may have omitted.

You will be allowed to select only as many pictures as was presented but you can change a selection by clicking on it a second time to turn off the yellow circle.
part III: social groups
target populations

• originally designed for individuals diagnosed with schizophrenia and schizoaffective disorder
• CET is for individuals whose mental illness related impairments cause significant functional disability
• people who have been sober for a few months and maintain sobriety
non-CET appropriate

• people with florid psychotic symptoms are not able to benefit for CET
• unable to read at a fifth grade level
• individuals with borderline personality disorder may need another treatment
social groups

- after neurocognitive training
- groups are 1.5 hours each and are held weekly
- 45 social-cognitive group sessions in the program
- groups of six to eight participants
Purpose of social groups

- Practice taking perspectives
- Understand the "gist" in social interactions
- Manage emotions
- Work towards individual recovery goal
- Enhance social comfort
- Improve social-cognitive abilities
group objectives

• participants feel more comfortable in social settings
• become more aware of others
• increase appropriate behavior
• increase motivation in social and vocational goals
components of social groups

- experimental learning and real-life cognitive exercises
- present homework and lead homework reviews
- provide feedback to peers
- receive psychoeducation on mental illness
each group is formatted to provide consistency
group design

- CET Manual from Gerald E. Hogarty, MSW and Deborah P. Greenwald, Ph.D. as reference
- participants feel more comfortable in social settings
- become more aware of others
- increase appropriate behavior
- increase motivation in social and vocational goals
part IV: clinician training
keep participants on task

role of clinicians

provide active, supportive coaching

foster flexibility in thinking and communication

guide greater elaboration & organization in thinking

courage greater understanding of social cognition
clinicians must be flexible

...and willing to learn new ways of thinking
basic considerations for clinicians

• clear level of interest
• knowledge of the population
• an open mind
• an ability to resist a traditional psychotherapy stance
• being curious
• perseverance

clinician characteristics

• tolerance for ambiguity
• cognitive flexibility
• able to adapt to new ways of thinking and acting
• ability and the disposition to think abstractly
• master a theoretical understanding of the disorders they are treating
clinician characteristics...cont’d

• desire for and a love of learning
• open to intellectual growth
• similar role as teacher - an educator and a mentor
• desire to work as part of a team
• a sense of playfulness
• optimistic
• creative
agency support to clinicians

- what is CET
- why in AZ?
- train-the-trainer process
- modalities
- plan for the agency
- target population
- characteristics of clients and staff
- overview of online exercises
- categories of exercises and order
becoming a CET coach

- introduction via demonstration to the exercises
- attempt exercises with trainer and raise awareness to the challenge of the exercises
- process the experience of practicing exercises with trainer
developing strategies to coach clients

- allows clinicians-in-training to struggle
- coach staff to develop their own strategies
- strategies are validated and expanded
methods to train clinicians

• screenshots of exercises with strategies and tips
• video recording with instructions voice-over
• assign reading
• model coaching while staff completes exercises
part IV: reimbursement
Arizona Covered Services Guide

Cognitive Enhancement Therapy (CET) is also known as Cognitive Remediation Therapy (CRT)

- Currently, only independently licensed practitioners can bill
- Plan to add BHPs for billing
- BHTs can use “Skill building” code
General Definition

The facilitation of recovery from cognitive impairments in order to achieve independence or the highest level of functioning possible. Goals of cognitive rehabilitation include: relearning of targeted mental abilities, strengthening of intact functions, relearning of social interaction skills, substitution of new skills to replace lost functioning and controlling the emotional aspects of one’s functioning. Treatment may include techniques such as auditory and visual attention directed tasks, memory training, training in the use of assistive technology, and anger management. Training can be done through exercises or stimulation, cognitive neuropsychology, cognitive psychology and behavioral psychology, or a holistic approach to include social and emotional aspects. Training is generally provided one-on-one and is highly customized to each individual’s strengths, skills, and needs.
AZ Covered Services Guide

II. B. 2. Cognitive Rehabilitation

General Information

Service Standards/Provider Qualifications

Cognitive rehabilitation services must be provided by individuals who are qualified behavioral health professionals as defined in 9 A.A.C. 10 and who can bill independently using the appropriate CPT codes. Code Specific Information

CPT Codes

<table>
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<tr>
<th>CODE</th>
<th>DESCRIPTION</th>
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<tr>
<td>97532</td>
<td>Development of cognitive skills to improve attention, memory, problem solving (includes compensatory training), direct (one on one) patient contact by the provider, each 15 minutes.</td>
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questions & discussion


references


thank you!

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