Corporate Medical Policy

Cognitive Rehabilitation

Description of Procedure or Service

Cognitive Rehabilitation Therapy (CRT) is therapeutic treatment provided to retrain the injured brain in its cognitive abilities of memory, decision making, focus, perception, planning, and learning. CRT is usually one component within a comprehensive brain injury plan of care that includes instruction and feedback, repetition, and memory stimulating aids. The expected outcome is demonstrated through social, communication, behavior, and academic/vocational performance.

Policy Statement

GEHA will provide coverage for Cognitive Rehabilitation (as a distinct and definable component of the rehabilitation process) when it is determined to be medically necessary because the medical criteria and guidelines as documented below have been demonstrated.

Note: For information related to coma stimulation, please specifically refer to GEHA Policy: Sensory Stimulation in Coma.

Benefit Application

Coverage of outpatient cognitive rehabilitation is subject to this coverage policy and GEHA's benefit as defined by in the current member benefit brochure

When treatment for Cognitive Rehabilitation is covered

Cognitive Rehabilitation (as a distinct and definable component of the rehabilitation process) may be covered when clinical documentation supports the presence of each of the following:

1. Neuropsychological testing has been performed and neuropsychological results will be used in treatment-planning and directing rehabilitation strategies, and
2. The cognitive deficits have been acquired as a result of neurologic impairment due to moderate to severe traumatic brain injury or cerebrovascular accident, and
3. The member has been seen and evaluated by a neuropsychiatrist or neuropsychologist, and
4. The member is able to actively participate in a cognitive rehabilitation program (e.g., is not comatose or in a vegetative state); and
5. The member is expected to make significant cognitive improvement.

When treatment for Cognitive Rehabilitation is not covered

Cognitive Rehabilitation (as a distinct and definable component of the rehabilitation process) is not covered when the clinical documentation fails to provide evidence to demonstrate the criteria set forth in this policy.
Cognitive Rehabilitation is not covered for other diagnosis including but not limited to:

A. Cerebral palsy (Rozkalne et. al., 2019)
B. Down syndrome (Dykens, 2009)
C. Alzheimer’s disease (Bahar-Fuchs et. al., 2013)(Kurz et. al., 2012)
D. Attention deficit hyperactivity disorder (Hayes, 2011)(Sonuga-Barke, 2013)
E. Developmental disorders (autism)(Reichow et. al., 2013)
F. Schizophrenia (Barlati et.al., 2012) (Eack et. al., 2010)(McGurk, et. al., 2007)(Matsui et. al., 2009)
G. Parkinson’s disease (Wade et. al., 2003)
H. Epilepsy/seizure disorders (Farina et. al., 2015)
I. Learning disabilities (Reichow et. al., 2013)
J. Mental retardation (Reichow et. al., 2013)
K. Dementia including vascular dementia (Bahar-Fuchs et. al., 2013)(Kurz et. al., 2012)
L. Cognitive or memory decline caused by multiple sclerosis, chronic obstructive pulmonary disease or other chronic disease (Amato et. al., 2006)(das Nair et. al., 2016)(O’Brien et. al., 2008)(Incalzi et. al., 2008)
M. Mild traumatic brain injury including sports-related concussion (Burke et. al., 2015)
N. Bipolar disorder (Kluwe-Schiavon et. al., 2015)
O. Depression (Hofmann et. al., 2012)(Driessen et. al., 2013)
P. Social phobia (Hofmann et. al., 2012)
Q. Substance abuse disorders (Rezapour et. al., 2015)
R. Fetal Alcohol Syndrome (Paley B. & O’Connor, M., 2011)
S. Chemotherapy Induced Cognitive Dysfunction (Fardell, et. al., 2011)
T. Post-anoxic encephalopathy (Incalzi et. al., 2008)

**Provider Documentation**

Services must be ordered by a physician and must include the specific professional skills the patient needs, the medical necessity for the therapy, and an anticipated length of time the services are needed.

Authorizations are concurrent, based on medical necessity, and on-going therapy approval is based on documented measureable progress towards established long term and short term specific, quantitative, and objective treatment goals that are documented in the member’s treatment record. Services must performed either by an Occupational Therapist, Physical Therapist, Speech Therapist, neuropsychologist or other psychologist, neuropsychiatrist, psychiatrist or other physician.

Documentation must include the above mentioned items in addition to:

A. Initial cognitive therapy evaluation
B. Specific interventions for functional communication deficits (if applicable)
C. Compensatory memory strategy training
D. Diagnosis along with date of onset
E. The frequency and duration of each treatment
F. The specific techniques that make up the plan of care
G. Progress notes and re-evaluation assessment (for concurrent reviews)

Evidence that supports the criteria set forth in this policy.

**Policy Guidelines**

Origination Date: Jan 2019
Peer Reviewed: Jan 2020
Next Review Date: Jan 2021
In 2016, the Department of Veteran Affairs and Department of Defense (VA/DOD) updated their clinical practice guidelines for treatment of traumatic brain injury and concussion (mTBI). The guideline recommends that patients of mTBI who demonstrate cognitive symptoms related to memory, attention, or judgement beyond 30 days post trauma and have not responded to treatment for such symptoms be referred to a cognitive rehabilitation program. Assessment of improvement outcomes should continue. Continuance of a cognitive rehabilitation program without patient improvement is not necessary.

The International Group of Researchers and Clinicians (INCOG) (Bayley, et al., 2014) published guidance regarding assessment and rehabilitation of Traumatic Brain Injury. They recommended rehabilitation interventions specifically tailored to each patient often involving the patient’s home or work needs. This may include restorative therapy accompanied by functional adaption, compensation and manipulating the environment to overcome a TBI inflicted disability.

The Agency for Healthcare Research and Quality (AHRQ) (Basure, et al, 2016) issued a comparative effectiveness review on multidisciplinary CR for moderate to severe TBI in adults. The goal was to identify the most effective multidisciplinary post-acute rehabilitation interventions for this population. The authors concluded that the body of evidence is not informative regarding effectiveness or comparative effectiveness of multidisciplinary post-acute rehabilitation, stating that failure to draw broad conclusions must not be misunderstood to be evidence of ineffectiveness. According to the authors, the limited evidence on this topic stems from the complexity of the condition and treatments resulting in limited available research and from limitations within that research to answer salient research questions about what works for which patients. Further research was suggested to address methodological flaws in such studies as well as ongoing questions regarding efficacy.

Cognitive Rehabilitation Task Force of the American Congress of Rehabilitation Medicine Brain Injury Interdisciplinary Special Interest Group: Cicerone et al. (2011) published a meta-analysis as part of the task force recommendations in 2011. Recommendations were stratified by domain (attention, vision, language and communication, memory, executive functioning, problem solving, awareness, and holistic cognitive rehabilitation) and classified as either practice standards (highest level of recommendation), practice guidelines (moderate recommendation), or practice options. The authors concluded that there was sufficient information to support evidence-based clinical protocols and implementation of empirically supported therapies for cognitive disability after TBI and stroke (Cicerone et al., 2011).

**Background**

CRT is used in addition to other therapies to treat cognitive deficits (e.g., attention, language, memory, decision making, perception, sequencing, problem solving, and visual processing) that are the result of brain injury or traumatic brain injury. Services are directed to achieve functional changes by: reinforcing, strengthening or establishing previously learned patterns of behavior, or establishing new patterns of cognitive activity or mechanisms to compensate for impaired neurological systems.

This may be referred to by other names including: cognitive therapy, neurocognitive therapy, neurocognitive rehab, neuro rehabilitation, post or subacute brain injury program, comprehensive day neuro treatment. The treatment regimen usually includes one of the following modalities: Specific interventions for functional communication deficits, including pragmatic conversational skills, or Compensatory memory strategy training.
Services may be provided by an occupational therapist, physical therapist, speech/language pathologist, neuropsychologist, or a physician. Care Plans may vary depending on the individuality of the patient and the type/effect of injury. A panel assembled by the National Institute of Health (NIH, 1999) noted these plans of care share common characteristics in that they are structured, systematic, goal directed, and individualized and they involve learning, practice, social contact, and are relevant.

Centers for Disease Control and Prevention (CDC, 2015) define traumatic brain injury as "a traumatic brain injury is caused by a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain." These injuries are principally the result of motor vehicle accidents, violence, sports injuries, and falls.

Brain injury other than traumatic brain injury is defined as damage to the brain due to stroke, aneurysm, anoxia, encephalitis, brain tumors, and brain toxins. Either type of injury may result in significant physical, cognitive, and psychosocial impairment in functioning and consciousness.

In October 2011, the Institute of Medicine (IOM) released the report Cognitive Rehabilitation Therapy for Traumatic Brain Injury: Evaluating the Evidence, assessing the published evidence for the effectiveness of using cognitive rehabilitation therapy (CRT) to treat people with traumatic brain injury (TBI). It was concluded that cognitive rehabilitation therapy interventions are promising approaches but further development and assessment of this therapy is required.

Das Nair et. al. (2016) conducted a study consisting of 514 participants. Seven trials were conducted with community participants, four with in-patients, and two with mixed community and in-patient samples. Participants received various types of memory retraining techniques, including training using computer programs and training in the use of memory aids, such as diaries or calendars. In three studies treatment was provided in groups and in 10 studies treatment was provided individually. Treatment lasted between two weeks and 10 weeks. In these studies, those who received the treatment were compared with a control group. The control group included those who did not receive cognitive rehabilitation or received another form of treatment. The control groups varied. Some studies had a control group wherein people received their usual care, whereas in others individuals in the control groups were placed on a waiting list to receive cognitive rehabilitation.

It was found that people who received cognitive rehabilitation reported fewer memory problems in daily life immediately after treatment compared with the control groups. This represents a small to moderate effect of the intervention in comparison to the control group. However, there was no evidence that the benefits persisted in the long term. We found no evidence that cognitive rehabilitation improved people's independence in activities of daily living, mood, or quality of life. There was no information about any harm caused to participants from taking part in cognitive rehabilitation.

In March 2018, Cogollor et. al. conducted a literature review to provide an overview of the practices implemented for the assessment of stroke patients and cognitive rehabilitation. A total of 3469 results were retrieved from Web of Science, 284 studies from Journal of Medical Internet Research, and 15 European research projects from Community Research and Development Information Service from the last 15 years were reviewed for classification and selection regarding their relevance.

The objective of this study was to provide an identification of the effective assessment of rehabilitation practices for cognitive disorders from a traditional perspective to a more technological one by
presenting the most recent advanced eHealth systems and projects to not only maintain but also improve the cognitive status of both elderly people and stroke patients in their daily living.

Moreover, this study encompasses the concepts and manifestations in the execution of daily tasks of the main and most common stroke-related syndromes mentioned before, which can cause deficits in the execution of daily activities. They are presented in a broader context considering their influence in a high percentage of stroke survivors.

It was concluded that current and future large-scale initiatives focused on smart environments should try to present all these features to users. The design and use of personalized and eHealth rehabilitation systems, which could be used for the assessment of a wide range of neurological disorders including those syndromes not presented in this study, will reduce hospitalization rates as well as the frequency of home visits by health professionals, which means a reduction in costs for the national health care services.

**Regulatory Status**

Cognitive rehabilitation programs are not subject to regulation by the FDA.

**The following codes are for reference purposes only and do not imply that the service is covered or non-covered. Applicable codes may include but are not limited to the following.**

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<thead>
<tr>
<th>CPT/HCPCS</th>
<th>Definition</th>
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<tbody>
<tr>
<td>97127</td>
<td>Therapeutic interventions that focus on cognitive function (e.g., attention, memory, reasoning, executive function, problem solving, and/or pragmatic functioning) and compensatory strategies to manage the performance of an activity (e.g., managing time or schedules, initiating, organizing and sequencing tasks), direct (one-on-one) patient contact.</td>
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<tr>
<td>97537</td>
<td>Community/work reintegration training (e.g., shopping, transportation, money management, avocational activities and/or work environment/modification analysis, work task analysis, use of assistive technology device/adaptive equipment), direct one-on-one contact, each 15 minutes</td>
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<tr>
<td>G0515</td>
<td>Development of cognitive skills to improve attention, memory, problem solving (includes compensatory training), direct (one-on-one) patient contact, each 15 minutes</td>
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**Scientific References**


Policy implementation and updates

Created January 2019

January 2020    Content addition, referencing update. No coverage change.