

Corporate Medical Policy

Neuropsychological Testing (NPT)

Description of Procedure or Service

Psychological testing refers to a series of tests used to evaluate and treat an individual with emotional, psychiatric, neuropsychiatric and/or personality illnesses, as well as those developmental delays. These tests are usually completed in 6 hours or less.

Neuropsychological testing is used to determine the brain's capacity with respect to short and long term memory, abstract reasoning, attention concentration, executive function, motor skills and other cognitive and psychological factors. These tests can take up to 10 hours to complete.

Psychological tests assess a range of mental abilities and attributes, including achievement, ability, personality and neurological functioning. Psychological testing, including neuropsychological assessment, utilizes a set of standardized tests, whose validity and reliability have been established empirically. They allow for an assessment of a patient's cognitive and behavioral functioning and an analysis of changes related to mental or physical disease, injury, or abnormal development of the brain. Research has shown that the scores from these tests are reproducible and can be compared to those of normal persons of similar age, sex and demographic background to yield valid conclusions.

Neuropsychological testing typically takes up to 10 hours to perform, including administration, scoring and interpretation. It is generally not necessary to repeat neuropsychological testing at intervals less than 3 months after completion of testing.

Background

Psychological tests are only one element of a psychological assessment. They should never be used as the sole basis for a diagnosis. A detailed clinical interview, including a complete history of the test subject and a review of psychological, medical, educational, and other relevant records is required to lay the groundwork for interpreting the results of any psychological measurement.

Neuropsychological testing is a sub classification of psychological testing and a well-established method for evaluating patients who demonstrate cognitive or behavioral abnormalities. Neuropsychological testing is used when a differentiation between organic versus functional disorders is needed to direct proper therapy (e.g., occupational, physical, or speech and language therapy), predict neuropsychological recovery, or monitor progress. Neuropsychological tests includes examples, such as: Halsted-Reitan neuropsychological battery or its components; Luria-Nebraska; Wechsler Adult Intelligence Scale (WAIS); Wechsler Intelligence Scales for Children - Revised (WISC-R); Wechsler Memory Scale; and the Reitan Indiana neuropsychological test.

Neuropsychological testing may be necessary for persons with documented neurologic disease or injury (e.g., traumatic brain injury, stroke) when there is uncertainty about the degree of impairment, or when

an organic deficit is present but information on anatomic location and extent of dysfunction is required. An organic deficit is defined as a symptomatic manifestation of structural cerebral or systemic medical pathology, as opposed to being considered psychological or emotional in nature (functional). Such testing can also be used to systematically track progress in rehabilitation after brain injury or other neurological disease. Serial assessment in nonprogressive conditions, such as head injury, documents the patient's rate of recovery and potential for returning to work.

Neuropsychological testing is used in persons with documented changes in cognitive function to differentiate neurologic diseases (i.e., one of the types of dementia) or injuries (e.g., traumatic brain injury, stroke) from depressive disorders or other psychiatric conditions (e.g., psychosis, schizophrenia) when the diagnosis is uncertain after complete neurological examination, mental status examination, and other neurodiagnostic studies (e.g., CT scanning, MR imaging). The clinician presented with complaints of memory impairment or slowness in thinking in a patient who is depressed or paranoid may be unsure of the possible contribution of neurological changes to the clinical picture.

Neuropsychological testing may be particularly helpful when the findings of the neurological examination and ancillary procedures are either negative or equivocal. The differential diagnosis of incipient dementia from depression is a case in point, particularly when computed tomography (CT) fails to yield definitive results.

Neuropsychological testing may be indicated in persons with epilepsy or hydrocephalus. Neuropsychological testing is used in these patients to monitor the efficacy and possible cognitive side effects of drug therapy (e.g., new anti-convulsant drug therapy) by comparing baseline performance with subsequent testing performance. Neuropsychological testing is also used to assess post-surgical changes in cognitive functioning to guide further treatment services. Preferably, these tests should be administered by a certified psychologist trained to conceptualize the neuro-anatomical and the neurobehavioral implications of the diagnostic entities under consideration and who is capable of interpreting patterns of test scores in view of principles of lateralization and localization of cerebral function.

Neuropsychological testing is used for initial evaluation of cognitive deterioration associated with acquired immunodeficiency syndrome (AIDS), and for re-evaluation of persons with AIDS who show further deterioration, to distinguish between organic-based deterioration and deterioration from depression or chronic illness, in order to direct appropriate treatment. Neuropsychological testing is also used in the initial evaluation of cognitive deterioration associated with Alzheimer's disease. It is also used for persons diagnosed with Alzheimer's disease receiving medication for dementia, to evaluate deterioration in cognitive functioning to distinguish between diminished effect of the medication and organic worsening of the disease. Serial administration of parallel forms of memory tests has been employed to investigate the effects of cholinergic agents and other drugs on dementia of the Alzheimer's type. Available medications for Alzheimer disease provide only a temporary cessation of the organic deterioration associated with Alzheimer's disease, such that repeat testing may be necessary to aid in deciding whether or not to increase or discontinue the drug. Neuropsychological testing typically takes up to 10 hours to perform, including administration, scoring and interpretation. It is not necessary, as a general rule, to repeat neuropsychological testing at intervals less than 3 months from completion of test. In general, neuropsychological testing may not be as helpful in individuals over 65 years of age.

Psychological and neuropsychological testing has been used to assess of the neurotoxic effects of alcohol and/or drug abuse or dependence. Chronic alcohol abuse can result in cognitive and memory defects which resolve to a varying degree depending on the duration of abstinence and the extent of neuronal loss or atrophy. However, it is inappropriate to perform psychological and neuropsychological testing in a patient to assess the neurotoxic effects of alcohol or drug abuse or dependence during the detoxification period or within the early period of abstinence from the offending drug. The results of psychological and neuropsychological assessment are unreliable when an individual is actively abusing alcohol or drugs and for some period of time after the acute phase of alcohol or drug withdrawal.

Psychological and neuropsychological testing has been used in the educational context in children with suspicion of a learning disorder leading to changes in school performance, so as to differentiate between mental subnormality, emotional disturbance, and the specific learning disabilities in speech and reading (e.g., dyslexia). Psychological and neuropsychological testing are also used to develop a specialized treatment plan to help the child improve the performance of these cognitive functions leading to a better performance in school, work, and personal relationships. However, psychological and neuropsychological testing for educational reasons is not covered, exclude educational testing. In addition, psychological and neuropsychological testing performed for educational reasons is not considered treatment of disease. This testing is usually provided by school systems under applicable state and federal rules.

Psychological and neuropsychological testing of children for the purpose of diagnosing attention deficit/hyperactivity disorder (ADHD) is not necessary, unless there is strong evidence of a possible neurological disorder or co-morbid behavioral health disorder. There are few medical conditions which present with ADHD-like symptoms and most patients with ADHD have unremarkable medical histories. In general, attention deficit disorders are best diagnosed through a careful history and the use of structured clinical interviews and dimensionally based rating scales. Most psychologists obtain behavior ratings at home from the parents and at school from the teacher. Examples of rating scales commonly used by psychologists are the Achembach Child Behavior Checklist, Connors Rating Scales, and the ADHD Symptoms Rating Scale. Psychological and neuropsychological testing may be used to assess functional competence in relationship to legal matters. However, such use is not considered treatment of disease.

Psychological and neuropsychological testing performed as part of a research program is also not considered treatment of disease. The types and numbers of neuropsychological tests given for each condition is not standardized. Most psychologists will perform an in-depth interview after the patient has filled out a standardized questionnaire asking questions about history, symptoms and functioning, and based on this evaluation the psychologist will plan the testing regimen.

While neuropsychological testing may be useful to distinguish cognitive decline due to dementia from cognitive decline due to depression, its use in patients with chronic fatigue syndrome (CFS) has yet to be established.

Regulatory Status

The services herein referenced are not universally subject to specific regulation by the Federal Drug Administration or any other referenced Federal entity. However, there are some devices marketed as medical devices used for testing purposes, such as ImPACT, ImPACT Pediatric, Cognivue and Mindstreams which are subject to such regulation; for example, pursuant to the Federal Food, Drug, and Cosmetic Act , 21 U.S.C.

Benefit Application

When testing is done for evaluation of a mental health condition, it is administered as part of the mental health benefit. When performed as part of a medical diagnosis, it is considered under the medical benefit coverage.

NPT for employment, disability qualification or legal/court-related purposes is not a covered benefit as it is not considered treatment of disease.

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits.

Policy Statement

GEHA administratively allows 6 hours of neuropsychological (NPT) or psychological (PT) testing. Any hours beyond initial 6 hours request will be reviewed for medical necessity when the medical criteria and guidelines as documented below have been demonstrated.

When Neuropsychological Testing is covered

GEHA considers neuropsychological testing (NPT) medically necessary when provided to aid in the assessment of cognitive impairment due to medical or psychiatric conditions, when **all** of the following criteria are met:

- A. The number of hours requested for testing does not exceed the reasonable time necessary to address the clinical questions with the identified measures: Neuropsychological testing typically takes up to 10 hours to perform, including administration, scoring and interpretation.; **and**
- B. The testing techniques are validated for the proposed diagnostic question or treatment plan; **and**
- C. The testing techniques do not represent redundant measurements of the same cognitive, behavioral or emotional domain; **and**
- D. The testing techniques submitted are both validated for the age and population of the member; and they are the most updated version of the instrument; **and**
- E. The instruments selected have the empirically substantiated reliability, validity, standardized administration and clinically relevant normative data to assess the diagnostic question or treatment planning goals.

GEHA considers neuropsychological (NPT) or psychological testing (PT) medically necessary when needed to enhance psychiatric or psychotherapeutic treatment outcomes after a detailed diagnostic evaluation if:

- A. Testing is needed to aid in the differential diagnosis of behavioral or psychiatric conditions when the member's history and symptomatology are not readily attributable to a particular psychiatric diagnosis and the questions to be answered by testing could not be resolved by a psychiatric/diagnostic interview, observation in therapy, or an assessment for level of care at a mental health or substance abuse facility; **or**

- B. Testing is needed to develop treatment recommendations after the member has been tried on various medications and/or psychotherapy, has not progressed in treatment, and continues to be symptomatic; **and**

ALL of the following criteria are met:

- A. The number of hours or units requested for testing does not exceed the reasonable time necessary to address the clinical questions with the identified measures; and
- B. The testing techniques are validated for the proposed diagnostic questions or treatment plan; and
- C. The testing techniques do not represent redundant measurement of the same cognitive, behavioral or emotional domain; and
- D. The testing techniques are both validated for the age and population of the member; and they are the most updated version of the instrument; and
- E. The instruments selected have the empirically substantiated reliability, validity, standardized administration and clinically relevant normative data to assess the diagnostic question or treatment planning goals.

Conditions considered appropriate for NPT/PT services include but are not limited to:

- A. Differentiating organic deficits from psychological deficits (structural CNS issues versus schizophrenia)
- B. Serial assessments for progress brain injury disorders (TBI, stroke, differentiation of brain damage from a depressive disorder) and progressive neurological disorders (Parkinson's disease, Alzheimer's disease, epilepsy, hydrocephalus, multiple sclerosis)
- C. Determination of cognitive deficits in seizure disorders
- D. Evaluation of intellectual deficits in AIDS

When Neuropsychological Testing is not covered

- A. Pre-surgical clearance (e.g. bariatric surgery). An evaluation by a psychologist or psychiatrist may be required
- B. Psychological and neuropsychological testing of children for the purpose of diagnosing attention deficit/hyperactivity disorder (ADHD)
 - o Attention deficit disorders are typically diagnosed through a careful history and the use of structured clinical interviews and dimensionally based rating scales. Most psychologists obtain behavior ratings at home from the parents and at school from the teacher. Commonly used scales include the Achembach Child Behavior Checklist, Connors Rating Scales, and the ADHD Symptoms Rating Scale
- C. For the diagnosis of pervasive developmental disorders (Autism Spectrum Disorders)
- D. Neuropsychological testing performed for educational reasons as it is not considered treatment of disease. This testing is usually provided by school systems under applicable state and federal rules.

- E. For neurotoxic effects of alcohol and/or drug abuse or dependence in a patient during the detoxification period or within the early period of abstinence from the offending drug because the results are unreliable
- F. In the evaluation of Chronic Fatigue Syndrome
- G. Employment, disability qualification or legal/court-related purposes
- H. In the evaluation, of:
 1. non-epileptic seizures,
 2. fibromyalgia,
 3. Persian Gulf War unexplained illnesses,
 4. toxic mold and sick building syndrome
 5. silicone breast implant disease

Policy Guidelines

Psychological and neuropsychological tests provide a standardized means of sampling behavior, an objective method for evaluating responses, and a tool for comparing the functioning of an individual with peers. Standardized tests are administered under uniform conditions, scored objectively and designed to measure relative performance. Test results usually are interpreted with reference to a comparable group of people, the standardization, or normative sample.

Psychological testing requires a clinically-trained examiner. All psychological tests should be administered, scored, and interpreted by a qualified professional, as governed by licensure and scope of practice, with expertise in the appropriate area.

Physician documentation

Applicable codes may include:

96116	Neurobehavioral status exam (clinical assessment of thinking, reasoning and judgment, eg, acquired knowledge, attention, language, memory, planning and problem solving, and visual spatial abilities), per hour of the psychologist's or physician's time, both face-to-face time with the patient and time interpreting test results and preparing the report
96121	Neurobehavioral status examination (clinical assessment of thinking, reasoning and judgment, [eg, acquired knowledge, attention, language, memory, planning and problem solving, and visual spatial abilities]), by physician or other qualified health care professional, both face-to-face time with the patient and time interpreting test results and preparing the report; each additional hour (List separately in addition to code for primary procedure)
96125	Standardized cognitive performance testing (et, Ross Information Processing Assessment) per hour of a qualified health care professional's time, both face-to-face time administering tests to the patient and time interpreting these test results and preparing the report
96130 - 96131	Psychological testing evaluation services by physician or other qualified health care professional, including integration of patient data, interpretation of standardized test results and clinical data, clinical decision making, treatment planning and report,

	and interactive feedback to the patient, family member(s) or caregiver(s), when performed
96132-96133	Neuropsychological testing evaluation services by physician or other qualified health care professional, including integration of patient data, interpretation of standardized test results and clinical data, clinical decision making, treatment planning and report, and interactive feedback to the patient, family member(s) or caregiver(s), when performed
96136-96137	Psychological or neuropsychological test administration and scoring by physician or other qualified health care professional, two or more tests, any method
96138-96139	Psychological or neuropsychological test administration and scoring by technician, two or more tests, any method
96146	Psychological or neuropsychological test administration, with single automated, standardized instrument via electronic platform, with automated result only

Covered ICD-10 Codes if selection criteria are met:

E75.00 – E75.09; E75.10-E75.19; E75.23; E75.25; E75.29; E75.4; F01.50-F01.51; F03.90-F03.91; F07.89; F84.2;G30.01-G31.9; G91.0-G91.9; G93.7; I69.00-I69.019; I69.11-I69.119; I69.211-I69.219; I69.311-I69.319; I69.811-I69.819; I69.911-I69.919; R41.4; R41.82; S02.0-S02.92; S06.0-S06.9; S09.0-S09.93

ICD-10 codes not covered for indication listed above:

F10.10-F19.99; F80.0-F89; F90.0-F90.9; G43.001-G43.919; R53.82; Z01.812; Z01.812; Z13.40-Z13.49; Z13.850; Z13.858; Z13.89

Scientific references

1. Agency for Healthcare Research and Quality. Attention Deficit Hyperactivity Disorder: Diagnosis and Treatment in Children and Adolescents. Comparative Effectiveness Review. Number 203. https://effectivehealthcare.ahrq.gov/sites/default/files/pdf/cer-203-adhd-final_0.pdf
2. American Academy of Child and Adolescent Psychiatry. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Attention-Deficit/Hyperactivity Disorder. J Am Acad Child Adolesc Psychiatry. 2007;46(7):894-921
3. American Academy of Neurology. Practice parameter: Screening and diagnosis of autism: Report of the Quality Standards Subcommittee of the American Academy of Neurology and the Child Neurology Society. Neurology. 2000;55:468-479.
4. American Academy of Pediatrics. Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents Subcommittee on Attention-Deficit/Hyperactivity Disorder, Steering Committee on Quality Improvement and Management. Pediatrics. 2011:128(5)

5. American Educational Research Association (AERA), American Psychological Association (APA), and National Council on Measurement in Education. Standards for Educational and Psychological Testing. Revised Edition. Washington, DC: AERA; 1999.
6. Anastasi A. Psychological Testing. 7th edition. New York, NY: Macmillan; 1996.
7. Chouinard MJ, Braun CMJ. A meta-analysis of the relative sensitivity of neuropsychological screening tests. *J Clin Exp Neuropsychol*. 1993;15:591-607.
8. Feifel D. Attention-deficit hyperactivity disorder in adults. *Postgrad Med*. 1996;100(3):207-211, 215-218.
9. Grant I, Adams KM. *Neuropsychological Assessment of Neuropsychiatric Disorders*. 2nd Ed. New York, NY: Oxford University Press; 1996.
10. Hartlage LC. Neuropsychological testing of adults: further considerations for neurologists. *Arch Clin Neuropsychology*. 2001;16(3):201-13. [https://doi.org/10.1016/S0887-6177\(00\)00079-2](https://doi.org/10.1016/S0887-6177(00)00079-2)
11. Kovner R, Budman C, Frank Y, et al. Neuropsychological testing in adult attention deficit hyperactivity disorder: A pilot study. *Int J Neurosci*. 1998;96(3-4):225-235.
12. Kulas JF, Naugle RI. Indications for neuropsychological assessment. 2003;70(9):785-792. <https://www.mdedge.com/ccjm/article/94109/mental-health/indications-neuropsychological-assessment>
13. Robert L. Heilbronner Ph.D., Jerry J. Sweet, Deborah K. Attix, Kevin R. Krull, George K. Henry & Robert P. Hart (2010) Official position of the American Academy of Clinical Neuropsychology on serial neuropsychological assessments: the utility and challenges of repeat test administrations in clinical and forensic contexts, *The Clinical Neuropsychologist*, 24:8, 1267-1278, DOI: 10.1080/13854046.2010.526785

Policy implementation and updates

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