



2024 Psychological and Neuropsychological Testing *Billing and Coding Guide*

EXECUTIVE SUMMARY

The 2024 Psychological and Neuropsychological Testing Billing and Coding Guide is an essential comprehensive billing and coding resource.

This Guide was developed by APA Services Inc. and is specifically designed to provide an objective explanation of the coding guidelines and payment policies established by the American Medical Association (AMA) and the Centers for Medicare and Medicaid Services (CMS), as well as describe the structure, function, and utilization of the CPT® code set.

The information contained in each of the Guide's sections is provided below. APA encourages payers and providers to utilize the Guide to navigate the landscape of psychological and neuropsychological testing guidelines and procedures.

Please direct any questions about this Guide to the Office of Health & Health Care Financing at OHCF@apa.org. Additional APA Services resources are publicly available on APA's website (apaservices.org/practice/reimbursement/health-codes/testing).

SECTIONS

Competency and Training in Psychological & Neuropsychological Testing This section provides descriptions of scope that differentiate Psychological and Neuropsychological Testing services (page 1).

Coverage Indications and Medical Necessity This section provides descriptions of the assessment, test administration and scoring, and evaluation services; an explanation of the individual components of each service; and specifics on determining medical necessity (pages 1–8).

Limitations of Coverage This section provides examples of when Psychological and Neuropsychological Testing services are not considered to meet medical necessity (page 8).

Coding Information This section contains a complete listing and description of the psychological and neuropsychological testing CPT® codes that went into effect on January 1, 2019 (page 9).

Developmental Testing This section contains descriptions of payment policies, best practices and proper coding and reporting of Developmental Testing services (pages 9–10).

General Information This section includes a description of the elements typically required to be documented in the patient record and provides guidelines for billing testing services that occur over multiple days—a standard of practice for both psychological and neuropsychological assessment (pages 10–11).

Utilization Guidelines This section provides instructions to assess coverage provisions (i.e., whether a service or procedure is considered medically necessary) and appropriateness of services provided to a patient or group of patients. The instructions are intended to improve quality and efficiency of care, reduce unnecessary and/or inappropriate services, and manage the cost of health care benefits (pages 12–13).

Sources of Information This section lists the scientific evidence and educational resources to support the contents of this Guide (pages 14–15).

Clinical Examples This *separate* addendum provides expanded clinical examples as well as tips for proper coding, billing and documentation of testing services.



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The information provided throughout this Guide relates to both Neuropsychological and Psychological Testing services. Given the differences in scope, however, the two types of testing services are discussed separately as needed.

COMPETENCY AND TRAINING IN PSYCHOLOGICAL AND NEUROPSYCHOLOGICAL TESTING

Psychological and neuropsychological testing are complex activities that necessitate extensive knowledge and training, as articulated in several professional psychology guidelines and standards. The term “assessment qualifications” refers to the knowledge, skills, abilities, training/experience, and practice credentials considered suitable for the use of psychological tests and assessment materials, encompassing general knowledge and skills as well as specific qualifications (American Psychological Association, APA Task Force on Psychological Assessment and Evaluation Guidelines, 2020).

Foundational knowledge and skill in assessment is obtained through graduate-level coursework supplemented with supervised practica training and internship, and is furthered through post-degree training (Krishnamurthy et al., 2022; Society for Personality Assessment Board of Trustees, 2006). Graduate coursework includes, at minimum, coverage of psychological theories, psychometrics, psychopathology and diagnosis; instrument selection, administration, scoring, and interpretation; case conceptualization, integration of multiple sources of data; oral feedback and written communication of results (Krishnamurthy et al., 2022; Society for Personality Assessment Board of Trustees, 2006; Wright et al., 2021). Additional areas of training and preparation generally include issues of ethical/legal standards and cultural competence (American Psychological Association, APA Task Force on Psychological Assessment and Evaluation Guidelines, 2020). Currency in neuropsychological

and psychological assessment is obtained through assessment-focused continuing education, such as on new research and developments in the field (Krishnamurthy et al., 2022).

Psychological and neuropsychological testing and evaluation services should only be conducted by an appropriately trained and appropriately state-licensed psychologist, physician, or behavioral health qualified healthcare professional (QHP).

COVERAGE INDICATIONS, LIMITATIONS, AND MEDICAL NECESSITY

Neuropsychological Assessment

Neuropsychological assessments provide measurements of behavioral manifestations of central nervous system (CNS) disorders using techniques that provide objectivity, validity, and reliability. Information acquired from neuropsychological assessments can directly inform medical decisions by providing data relevant to diagnosis, progression or course of conditions, prognosis, and treatment of disorders. In addition, neuropsychological assessments can aid in making accurate predictions about functional abilities across a variety of disorders (Chaytor & Schmitter-Edgecombe, 2003; Gure, Kabeto, Plassman, Piette, & Langa, 2010; Marcotte & Grant, 2010; Sbordone & Long, 1996; Stille, Bender, Cunbar-Jacob, Sereika, & Ryan, 2010; Wilson, 1993; Wojtasik et al., 2009), and information from neuropsychological assessments are often incorporated into physician discharge summaries (Temple, Carvalho, & Tremont, 2006). Neuropsychological tests are administered in the context of a comprehensive evaluation that synthesizes data from clinical interview, record review, medical history, and behavioral observations.

Where appropriate, these evaluations consider neuroimaging, other neuro-diagnostic studies, and other lab/diagnostic studies to inform neuropsychologically-oriented interventions (AACN 2007).

Neuropsychological assessments are frequently requested to assess cognitive functioning for patients with a history of medical or neurological disorders that compromise cognition; congenital, genetic, or metabolic disorders known to be associated with impairments in cognitive or brain development; and reported impairments in cognitive functioning. Neuropsychological evaluations are also requested to assess cognitive function as a part of treatment planning, determining response to interventions, and to evaluate cognitive function as a part of the standard of care for treatment selection and treatment outcome evaluations (e.g., deep brain stimulators, epilepsy surgery).

Neuropsychological assessment is not limited in relevance to patients with evidence of structural brain damage. It is frequently necessary to document impairments in patients with possible/probable neuropsychological and neurobehavioral disorders. It is the evaluative approach of choice whenever objective documentation of subjective cognitive complaints and symptom validity testing are indicated.

Neuropsychological testing involves administration of standardized tests of cognitive and emotional functioning by a psychologist or QHP or appropriately-trained technician (also known as psychometrists) under the direction and supervision of the psychologist or QHP. There is no definition or guideline in Medicare of what a technician is, and definitions differ on a state-by-state basis. Technician supervision, instrument selection, data interpretation and analysis, report writing, consultation, interpretation of neuropsychological findings, and integration of assessment data with other relevant clinical data are the responsibility of the psychologist or QHP, who is independently licensed at the doctoral level. This is typically a clinical psychologist with appropriate training and expertise in neuropsychological assessment and cognitive functioning.

Other neuropsychological evaluation services include review of relevant medical records, clinical decision making that occurs throughout the course of the assessment process, integration of test results with other clinically relevant information, and interactive feedback of evaluation results to the patient and/or caregiver. *(For more information see description of individual services below.)*

Neuropsychological assessment typically requires gathering information across multiple psychological domains, including but not limited to: abstract reasoning, attention, language, problem-solving, memory, visual-spatial abilities, adaptive skills, and mood.

Neuropsychological assessment is considered medically necessary for one or more of the following indications, where initial assessment or assessment over time is needed in order to:

1. Assess cognitive or behavioral deficits related to known or suspected CNS impairment, trauma, or neuropsychiatric disorders, including when the information will be useful in determining a diagnosis, prognosis, or informing treatment planning; or
2. Establish a treatment plan by measuring functional abilities/impairments in individuals with known or suspected CNS and neuropsychiatric disorders; or
3. Determine the potential impact of substances that may cause cognitive impairment (e.g., radiation, chemotherapy, prescribed or illicit drugs, toxins) or result in measurable improvement in cognitive function, including when this information is utilized to determine treatment planning; or
4. Conduct pre-surgical or treatment-related measurement of cognitive function to determine whether one might safely proceed with a medical or surgical procedure that may affect brain function (e.g., deep brain stimulation, resection of brain tumors or arteriovenous malformations, epilepsy surgery, stem cell or organ transplant) or significantly alter a patient's functional status; or
5. Determine whether a medical condition impairs a patient's ability to comprehend and participate effectively in treatment regimens (e.g., surgical procedures, determining functional capacity for health care decision-making) or will permit the individual to function consistent with pre-injury or pre-illness levels; or
6. Design, administer, and/or monitor outcomes of cognitive rehabilitation procedures, such as compensatory memory training for brain-injured patients; or
7. Measure cognitive or functional deficits in children and adolescents based on an inability to develop expected knowledge, skills or abilities as required to adapt to cognitive, social, emotional, or physical demands; or
8. Evaluate primary symptoms of impaired attention and concentration that can occur in many medical and psychiatric conditions.

Psychological Assessment

Psychological assessment is the process of systematically collecting reliable and valid information about behavior from multiple sources in order to inform decisions about a patient's

mental or behavioral functioning, typically for the purpose of diagnoses, treatment planning, or treatment evaluation. As such, these assessments necessarily involve investigating phenomena that could influence or modulate the behavior of interest (e.g., medical history and condition, psychosocial factors, interpersonal relationship dynamics). While appropriately trained technicians are able to administer and score some psychological instruments, only psychologists or QHPs are able to conduct a psychological assessment (Society for Personality Assessment Board of Trustees, 2006).

Psychological instruments are used to assess a broad range of mental attributes, such as mood states, mental status, educational achievement, intellectual abilities, personality, and affective functioning. Interpretation of the information from psychological instruments and integration of results with other relevant clinical data must be performed only by a psychologist or QHP with training and expertise in psychodiagnostic assessment including the appropriate selection and use of normative data. Psychological assessment services by the psychologist or QHP include review of relevant medical records, clinical decision making that occurs throughout the course of testing, integration of test results with other relevant clinical information, report writing, and interactive feedback of assessment results to the patient and/or caregiver. *(For more information see description of individual services below.)*

Domains assessed in a psychological assessment typically consist of mood/emotional conditions and symptoms, mental status, adaptive functioning, and behavioral and interpersonal adjustment, with evaluation of acuteness vs. chronicity, severity, degree of functional impairment, comorbidity, and prognosis where information is available.

Examples include, but are not limited to: depression, anxiety, suicide and/or violence risk, anger expression and management, resilience and stress management capacities, psychological traits and states, personality dynamics, intellectual ability, information processing capacities, social-skill deficits, and family dynamics.

Psychological assessment is considered medically necessary when there is a need for one or more of the following:

1. Assess the presence, severity, or functional impairment of a psychological disorder in order to determine psychiatric diagnosis. This includes differentiation among different medical/psychological disorders that present with similar constellations of symptoms (e.g., determine whether anxiety is contributing to the dyspnea experienced by a patient with asthma).

2. Assess mental or behavioral factors impacting disease management. Some common, but not exclusive, examples are: (a) pre-surgical evaluation to identify psychological factors that may potentially affect or complicate the outcome of surgical procedures or aftercare (e.g., spinal surgery, bariatric surgery); (b) assessment of psychological factors impacting physical disease management and ability to comply with and benefit from medical interventions; and (c) assessment of psychological factors in patients experiencing chronic pain.
3. Assess specific psychological bases underlying functional complaints or disability.
4. Assess psychological barriers and strengths to aid in treatment planning. This includes, but is not limited to, treatment selection, treatment prognosis and outcomes, and identifying potential reasons for poor treatment response.
5. Assess risk factors needed to determine patients' risk of harm to self or others.
6. Perform symptom assessment as part of treatment selection or evaluation of treatment effectiveness.
7. Corroborate or refute impressions obtained from non-standardized interactions with patients, particularly when malinger or denial of psychological difficulty is suspected.
8. Assess attention and concentration difficulties and other cognitive deficits that are the sequelae of many medical conditions and/or impede functional adjustment.
9. Measure cognitive or functional deficits in children and adolescents based on an inability to develop expected knowledge, skills or abilities as required to adapt to cognitive, social, emotional, or physical demands.

Components of a Neurobehavioral Status Exam

▪ Neurobehavioral Status Examination

This is a clinical assessment of cognitive functions and behavior, and may include a clinical interview with the patient, caregivers, other informants, and/or clinical staff, as well as integration of prior history and other sources of clinical data with clinical decision making, further assessment and/or treatment planning and report. Evaluation domains may include but not limited to language, memory, acquired knowledge, attention, planning and problem solving, and visual-spatial abilities. When it precedes a neuropsychological evaluation, the neurobehavioral status exam would provide information to guide instrument selection (AMA CPT® Assistant, November 2006).

Note: The coding structure for the Neurobehavioral Status Examination includes a time-based/per hour code to report the first hour of service (i.e., 96116), plus an add-on code to report each additional hour required to complete the service (i.e., 96121).

A neurobehavioral status examination alone is insufficient to assess mild cognitive impairment. Such assessment requires additional (neuro)psychological testing.

Components of a Clinical/Diagnostic Interview

• Clinical/Psychiatric Diagnostic Interview

Psychological assessment typically begins with a clinical diagnostic interview conducted by the psychologist or QHP. The interview involves purposeful questioning with the patient as well as collateral interviews as appropriate, and review of relevant records. The interview covers several domains including, but not limited to: presenting problems and symptoms, history of problems/symptoms, reasoning and judgment, coping and problem solving, attention and concentration, mood and range of affect, functional impairment, and relevant developmental and family history. When it precedes the psychological testing, the diagnostic interview typically provides information to aid in the selection of the instruments.

Note: CPT® code 90791; *Psychiatric diagnostic evaluation*, is a comprehensive psychiatric diagnostic evaluation of psychological and psychosocial conditions, without medical services (see CPT® code 90792; *Psychiatric diagnostic evaluation with medical services*, for psychodiagnostic interview that includes medication management and medication services). It is an untimed procedure code and can be billed only one time for the service provided during a single encounter.

Components of Neuropsychological and Psychological Evaluation

Neuropsychological evaluations typically include integration of patient data with other sources of clinical data, data interpretation, clinical decision making, and treatment planning and report. Interactive feedback sessions are also typically performed with the patient and/or family member(s)/caregiver(s).

Evaluation domains for neuropsychological evaluation may include memory, language and communication, attention, executive function, intellectual function, visual-spatial function, sensorimotor function, validity and motivation, emotional and personality features, and adaptive behavior.

Psychological evaluations typically include integration of data from psychological instruments with other sources of clinical

data, data interpretation, clinical decision making (i.e., diagnosis), report, and treatment planning. It includes interactive feedback to the patient, family member(s) and/or caregiver(s).

Evaluation domains for psychological evaluation may include emotional, behavioral and interpersonal functioning, intellectual functioning, thought processes, and personality, as well as performance validity .

Components that are included within neuropsychological and psychological testing evaluation services are described below.

• Record Review

- › The provider reviews available medical and other records and referral question and determines whether an evaluation is appropriate; reviews presenting signs and symptoms; reviews other relevant medical history; and reviews any other relevant information contained that may affect the results and interpretation of the neuropsychological or psychological evaluation.

• Instrument Selection and Administration

- › Information from medical and other records, clinical interviews, and behavioral observations are integrated to guide the selection of specific neuropsychological or psychological instruments. The selection of instruments is a strategic process that takes into account patient characteristics (e.g., level of education, premorbid level of functioning, sensory abilities, physical limitations, fatigue level, age, cultural background, language, and ethnicity), referral question(s) and goals of the evaluation (e.g., establishing a diagnosis, measuring functional capacities, measuring treatment effects), and the patient's ongoing performance during the evaluation.
- › Neuropsychological and psychological instruments may include directly asking the patient questions, performance on a standard set of stimuli, and self-reports. Likewise, the instrument may be administered across a variety of media (e.g., paper-and-pencil, computer) or multiple-choice tests that measure functional impairment and abilities in areas such as but not limited to:
 - Intellectual abilities
 - Abstract reasoning and categorical thinking
 - Attention and concentration
 - Language and communication
 - Decision-making, strategy formation, and executive functioning (e.g., planning, organization, self-monitoring, mental flexibility, pragmatics)

- Learning and memory
 - Motor function, sensorimotor function, lateralized functions
 - Perception and perceptual organization
 - Visual-spatial cognition and visual-motor praxis
 - Mood and affect, conduct, personality, quality of life
 - Motivation, response style, response validity (e.g., performance validity, symptom validity)
 - Adaptive behavior (Activities of Daily Living)
 - Social-emotional adjustment, awareness and responsivity
 - Psychopathology (e.g., psychotic thinking or somatization)
 - Impulse control and conduct
 - Personality characteristics
 - Stress, coping, and problem-solving
 - Interpersonal adjustment
- **Clinical Decision Making**
 - › The psychologist or QHP evaluates how the patient is responding throughout the psychological or neuropsychological assessment process through direct observation of patient and/or communication with the technician. The psychologist or QHP alters the instrument selection or approach as needed based on clinically significant elements of the patient's ongoing behavior within the assessment. There will be variability across patients depending on a wide variety of factors including patient complexity, comorbidities, severity of medical condition(s) and other factors that drive the clinical decision making. Examples of factors that require intra-session clinical decision making include, but are not limited to:
 - Discovery of physical, sensory, or cognitive impairment impeding patient's ability to demonstrate their cognitive abilities on previously planned test instruments
 - Emotional/behavioral response
 - Level of patient functioning
 - Level of patient impairment
 - Nature of symptoms
 - Level of literacy
 - Level of language proficiency and/or acculturation
 - Changes in patient engagement with testing
 - Whether test results being collected are valid, reliable, and believed to be representative of domain intended to be measured
 - Determination that a higher level or more nuanced tests are required for accurate diagnosis
 - › Another important aspect of clinical decision making, based on observed intra-test behavior, may include the need to go beyond the standardized testing procedure to evaluate the level at which specific skills are present and for clarification and elaboration of the cognitive components leading to an individual's test responses. This modification of the standardized testing approach requires a high degree of professional judgment by the psychologist or QHP and expertise beyond technical competence in test administration and, when needed, is essential for accurate interpretation of the underlying reasons an individual may demonstrate low test performance.
 - › When utilizing a technician for test administration, the psychologist or QHP initially directs the technician as to tests and testing procedures to be used. During the testing session, the psychologist or QHP is available for consultation throughout the testing session in order to adjust testing activity.
 - › Clinical decision making by a psychologist or QHP occurs throughout the assessment process, whether a QHP or technician is administering the instruments (as documented in codes 96132 and 96133 for neuropsychological evaluation services and 96130 and 96131 for psychological evaluation services described below).
- **Interpretation and Integration of Test Results with Other Sources of Clinical Data**
 - › Instrument scores collected as part of a neuropsychological or psychological evaluation require interpretation by a psychologist or QHP with specific training and experience in neuropsychological or psychological assessment, respectively.

Further, scores are interpreted in the context of other sources of clinical data (e.g., patient demographic information, behavioral observations, relevant medical history, relevant psychosocial and contextual factors, etc.) and information is integrated into a clinical report. (See "Documentation Requirements" below)

Creation of Clinical Report (See "Interpretation and Integration of Test Results with Other Sources of Clinical Data" above and "Documentation Requirements" below)

- **Management and Treatment Planning**

- › The psychologist or QHP uses results of the assessment to respond to a referral question or assist with medical/behavioral health management and treatment planning (e.g., provides recommendations for medications and medical management strategies, rehabilitative therapies, strategies or supports to assist with medication and treatment plan adherence, psychological and other medical interventions, supervision needs, compensatory strategies that would be beneficial to minimize effects of cognitive impairments, increased awareness of and interventions to manage a patient's functional limitations).

- **Interactive Feedback Session**

- › The interactive feedback session is typically performed as part of neuropsychological and psychological evaluation services.
- › A post-evaluation interactive feedback session with the patient or family members/caregiver(s) is a typical part of the neuropsychological and psychological evaluation (American Psychological Association, 2017; Finn, 1996; Pegg et al., 2008; Postal and Armstrong, 2013). Such feedback has numerous clinically-meaningful benefits (Poston & Hanson, 2010), even including symptom improvements (Miller, Cano, & Wurm, 2013; Smith, Eichler, Norman, & Smith, 2015). Moreover, it is highly valued by patients (Westervelt, Brown, Tremont, Javorsky, & Stern, 2007) and physicians who refer their patients for neuropsychological assessments (Postal et al, 2017).
- › The interactive feedback session typically emphasizes any or all of the following:
 - Description of assessment results in a manner understandable to the patient.
 - Discussion of the relationship between information collected in the assessment and information about diagnosis and prognosis.
 - Patient education about their diagnosed condition and functioning with the goal of improving adherence to treatment plans and safety.
 - Explanation of treatment recommendations. In addition to those recommendations that are directly managed by the patient's medical provider (e.g., changes in medication or treatment), patients are provided with evidence-based treatment recommendations that are not typically managed by medical providers, and which are best explained by providers

with expertise in neuropsychological or psychological assessment, including tailored behavioral strategies to maximize functioning, safety measures such as driving recommendations, referrals to other specialty providers (e.g., psychiatry, rehabilitative therapists), recommendations for nonpharmacological interventions, and community resources.

- Communication of results to family members/caregiver(s) in order to explain treatment recommendations enhances treatment outcome for the patient (Postal 2018). In some cases, a patient may be undergoing treatment or may be too cognitively impaired to engage in such feedback. In such circumstances, where the QHP determines that feedback is necessary to ensure adherence to treatment plans including safety issues, feedback may be given to the patient's caregiver (with appropriate permissions and release of information).

Note: The coding structure for the psychological/neuropsychological testing evaluation services includes a time-based/per hour code to report the first hour of service (i.e., codes 96130/96132), plus an add-on code to report each additional hour required to complete the service (i.e., codes 96131/96133). The code for the first unit (hour) of service may only be used once in the coding of neuropsychological and psychological testing evaluation services for the episode of the assessment, even if the assessment spans additional days.

Components of Psychological or Neuropsychological Test Administration and Scoring (Data Gathering)

- **This set of codes is used for administration and scoring of psychological or neuropsychological testing by either**

The psychologist or QHP directly

AND/OR

A trained technician under the general supervision of a psychologist or QHP

- Psychological and neuropsychological testing involves administration of standardized tests of cognitive and emotional functioning by a psychologist or QHP or clinically-trained technician under the direction and supervision of the psychologist or QHP. As noted above, there is no definition or guideline in Medicare of what a technician is, and definitions differ on a state-by-state basis. Technician training and supervision, instrument selection, data interpretation and analysis, report-writing, consultation, and interactive feedback are the

responsibility of the psychologist or QHP who is independently licensed at the doctoral level.

For clinicians who employ a technician who conducts part of or all of the test administration, it would be typical for at least some of the scoring to be completed by the technician.

- Regardless of the individual administering and scoring the testing, these codes always involve general supervision of the technician and clinical decision making by the psychologist or QHP, and will always be billed in combination with the corresponding neuropsychological or psychological evaluation services code as follows.
 - › An appropriately state-licensed psychologist or behavioral health QHP provides a high degree of professional judgment and expertise in addition to technical competence in test administration.
 - › When testing is administered by a technician (codes 96138, 96139), the psychologist or QHP provides general supervision of the technician, oversight of the data and clinical decision making. These professional services would be captured under the professional evaluation service (codes 96130-96133). (See “Clinical Decision Making” above)
 - › Psychological or neuropsychological test administration and scoring services should be reported with codes 96136-96139.
 - When a psychologist or QHP personally administers and scores the psychological or neuropsychological test (i.e., without the use of a technician), code 96136 will be reported for the first 30 minutes, and add-on code 96137 will be reported for each additional 30-minute increment of time required to complete the test administration and scoring service.
 - When a technician (non-psychologist or non-QHP) under the supervision of a psychologist or QHP administers and scores the test, code 96138 should be reported for the first 30 minutes of technician test administration and scoring services, and add-on code 96139 is reported for each additional 30-minute increment.
 - Note that the codes for the first unit (30 min) of test administration and scoring (96136, 96138) are to be used only once for the episode of the complete evaluation regardless of the frequency of the testing sessions required of the evaluation.
- It is a common practice for both a psychologist and a technician to provide test administration and scoring for the same patient. Even when utilizing testing technicians, many psychologists and neuropsychologists incorporate their own test administration and scoring into the evaluation protocol. However, a National Correct Coding Initiative (NCCI) edit prevents CPT® codes 96136 and 96138 to be billed on the same day with the same patient without including an appropriate modifier.
- When clinically indicated, appending the appropriate modifier to the service (see below) that would have been denied will result in a bypass of the NCCI edit. This modifier indicates the medical necessity (as evidenced in the documentation) of the psychologist and the technician to perform separate, distinct and non-overlapping test administration and scoring services.
- Choosing the appropriate modifier for services that are not normally reported together, but are appropriate under certain circumstances, depends on how the test administration and scoring services were provided to the same patient on the same date of service.
- Modifier XE indicates the testing was performed during separate encounters:
 - › When the patient has an initial test administration encounter with the psychologist and then leaves the office—possibly to get lunch—but returns to the office later that day for a second encounter of test administration performed by the technician, Modifier XE would be appended to the base code for the second test administration and scoring service.
 - Modifier XE is used to identify a service that is distinct because it occurred during a separate encounter on the same date of service.
 - The submission of Modifier XE appended to a procedure code indicates that documentation is available in the patient’s records which will support the medical necessity of the psychologist and the technician to perform separate, distinct and non-overlapping test administration and scoring services during separate encounters on the same date of service.
 - This is unlikely to be a frequent circumstance, as often there is overlap between the technician and the psychologist for a given patient “encounter”, and XE would therefore not be the appropriate modifier (see *discussion regarding Modifier 59 below*).

- Modifier 59 indicates the testing was performed during the same encounter, but was a distinct procedural service
 - › When the psychologist begins administering the test battery and then the technician takes over (i.e., the patient doesn't leave the office), Modifier 59 would be appended to the base code for the second test administration and scoring service.
 - Modifier 59 is used to identify procedures/services, other than E/M services, that are not normally reported together, but are appropriate under the circumstances. However, Modifier XE would not be appropriate, as it is used to indicate that a service occurred at a separate encounter.
 - Documentation must support a different session, different procedure or surgery, different site or organ system, separate incision/excision, separate lesion, or separate injury (or area of injury in extensive injuries) not ordinarily encountered or performed on the same day by the same individual. However, when another already established modifier is appropriate, it should be used rather than Modifier 59 (see *discussion regarding Modifier XE above*).
- It should also be noted that if both a psychologist and a technician (under the supervision of the psychologist) provide test administration and scoring services with the same patient but on different dates of service, no modifier is required to be reported on the claim form.

Administration, with Single Automated Instrument via Electronic Platform, with Automated Result

- CPT® code 96146 is used to describe the use of a single, automated test (e.g., brief testing for given condition, monitoring progression of disease or condition, monitoring of response to intervention, etc.) administered via electronic platform (e.g., computer, iPad), that produces an automated report. This code was created to distinguish between providing a limited, single psychological or neuropsychological automated test versus providing a robust battery of tests (APAPO 2014; Roebuck-Spencer et al., 2017; Block et al., 2016).
- These services do not require a psychologist/QHP/technician for test administration and/or scoring (i.e., no psychologist or QHP work component).
- Code 96146 is reported when a single automated test with automated result is administered. If more than one automated test is administered, 96146 can only be billed once.
- When computer-generated interpretations are used as part of a battery of tests (i.e., two or more tests), they are integrated with other data by the psychologist or QHP using evaluation services codes 96130- 96133.

LIMITATIONS OF COVERAGE

Psychological and Neuropsychological testing is not considered reasonable and necessary when:

1. The patient is neurologically, cognitively, or psychologically unable to participate in a meaningful way in the testing process; or
2. The patient will not benefit from reasonable therapeutic or care options—there must be a reasonable expectation from a medical or psychological management perspective; or
3. Used as a routine screening tool given to the individual or to general populations in the absence of clinical justification (e.g., medical or psychological rationale); or
4. Administered for educational, vocational, or other non-clinical purposes that do not inform medical or health management (i.e., the purpose of testing is to alter or direct medical or health management); or
5. Comprised **exclusively** of self-administered, self-created, or self-scored inventories; or
6. Comprised exclusively of screening tests of cognitive function or neurological disease (whether paper-and-pencil or computerized, e.g., AIMS, Folstein Mini-Mental Status Examination); or
7. Testing and/or repeat testing is not required for medical or clinical decision-making (e.g., when the repeat testing is because of patient request without clinical justification); or
8. Administered when the patient is currently under the undue influence or impaired by alcohol, drugs (prescription or illicit), or other substances; or
9. Administered when the patient is currently experiencing acute delirium or psychosis; or
10. The patient has been diagnosed previously with brain dysfunction, such as Alzheimer's disease, and there is no expectation that the testing would impact the patient's medical, psychological, clinical, functional, or behavioral management.

CODING INFORMATION

Below are the CPT® code and code descriptors for psychological and neuropsychological testing services:

96116; Neurobehavioral status exam (clinical assessment of thinking, reasoning and judgment, e.g., 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; **first hour**

96121; Neurobehavioral status exam (clinical assessment of thinking, reasoning and judgment, e.g., 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)

96130; 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; **first hour**

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; **each additional hour** (List separately in addition to code for primary procedure)

96132; 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; **first hour**

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 feed-back to the patient, family member(s) or caregiver(s), when performed; **each additional hour** (List separately in addition to code for primary procedure)

96136; Psychological or neuropsychological test administration and scoring by physician or other qualified health care professional, two or more tests, any method; **first 30 minutes**

96137; Psychological or neuropsychological test administration and scoring by physician or other qualified health care professional, two or more tests, any method; **each additional 30 minutes** (List separately in addition to code for primary procedure) (96136, 96137, 96138, 96139 may be reported in conjunction with 96130, 96131, 96132, 96133 on the same or different days)

96138; Psychological or neuropsychological test administration and scoring by technician, two or more tests, any method; **first 30 minutes**

96139; Psychological or neuropsychological test administration and scoring by technician, two or more tests, any method; **each additional 30 minutes** (List separately in addition to code for primary procedure)

96146; Psychological or neuropsychological test administration, with single automated instrument via electronic platform, with automated result only

96112; Developmental test administration (including assessment of fine and/or gross motor, language, cognitive level, social, memory and/or executive functions by standardized developmental instruments when performed), by physician or other qualified health care professional, with interpretation and report; **first hour**

96113; Developmental test administration (including assessment of fine and/or gross motor, language, cognitive level, social, memory and/or executive functions by standardized developmental instruments when performed), by physician or other qualified health care professional, with interpretation and report; **each additional 30 minutes** (List separately in addition to code for primary procedure)

ICD-10 Codes that Support Medical Necessity for Neuropsychological and Psychological Testing

Neuropsychological and psychological assessment is considered medically necessary for the following indications:

- ICD-10 codes must be coded to the highest level of specificity. There are no ICD-10 codes listed in this Guide because coverage of the service is not based on diagnosis. Providers should use the appropriate ICD-10 code.

DEVELOPMENTAL TESTING

Developmental testing services should only be conducted by an appropriately state-licensed psychologist, physician, or behavioral health qualified healthcare professional with training in general child development, strong knowledge of medical, social,

behavioral, and emotional conditions impacting child development, standardized test administration, psychometrics and normative procedures, and interpretation of developmental measures.

The psychologist or QHP should report developmental testing CPT® codes 96112 and 96113 when standardized developmental measures are used to assess skill development in multiple areas that include: receptive and expressive language, social, cognitive, gross and fine motor, and adaptive functioning. Standardized developmental measures include, but are not limited to, measures such as the Bayley Scales of Infant and Toddler Development, Battelle Developmental Inventory, Mullen Scales of Early Learning, and Peabody Motor Scales. However, structured and semi-structured standardized observational instruments and interviews intended to assess for social, emotional, and behavioral development (e.g., the Autism Diagnostic Observation Schedule, 2nd edition (ADOS-2), Childhood Autism Rating Scale, 2nd edition (CARS-2), and Autism Diagnostic Interview-Revised (ADI-R)), can also be billed utilizing the Developmental Testing CPT codes.

When the primary referral question for young children or older children who may be delayed is to assess: (a) developmental skill acquisition appropriate for age; (b) loss of previously acquired skills; or (c) failure to attain expected skills, the QHP should report codes 96112/96113 for the total time spent administering, scoring, observing, interpreting, and clinical decision making related to the entire test battery, which must include the use of a standardized developmental instrument.

Best care practices often include interdisciplinary team evaluation for monitoring of development in the context of a medical condition or in response to noted developmental delays on standard pediatric screening. In these instances, multiple providers on the team, such as Developmental Behavioral Pediatrics and psychology, complete components of a developmental evaluation separately within the same visit. Often interdisciplinary evaluation will include one provider completing developmental testing to examine motor or physical development while the others are seeking to clarify the child's language, cognitive, or social developmental level. In these instances, both providers should appropriately bill developmental testing codes for aspects of the evaluation as they represent distinct procedures that are provided on the same day for the purpose of comprehensive and coordinated care.

When the primary referral question is not for developmental

concerns, but a standardized developmental instrument is used to determine loss of previously acquired skills or failure to attain expected skills for age, in the context of neuropsychological and/or psychological evaluation that directly address the referral question, the QHP should report code(s) 96112/96113 only for the time spent administering, scoring, observing, interpreting, and clinical decision making related to the standardized developmental instrument. Additional neuropsychological and/or psychological testing codes would then be used to capture the time spent administering, scoring, observing, interpreting, and clinical decision making related to the other types of measures included in the test battery (psychological and/or neuropsychological). The modifier 59 code should be utilized to indicate that developmental testing was provided and is a distinct service from the other testing completed during the evaluation.

The clinical interview is not included in the scope of codes 96112/96113 and represents a distinct service. Therefore, use of the code(s) 90791 OR 96116/96121 can be reported in conjunction with these services. When appropriate, interactive feedback should be provided directly to the family and/or members of the health care team.

Because interactive feedback is also not included in codes 96112 and 96113 and represents a distinct service, psychological or neuropsychological professional services (codes 96130, 96131, 96132, and 96133) can be reported for providing interactive feedback.

If necessary, Modifier 59, denoting that several distinct services were provided on the same day, should be appended when interview or interactive feedback services are provided on the same day as developmental testing.

GENERAL INFORMATION

Documentation Requirements

1. The patient's medical record should contain documentation that supports the medical necessity for testing or other services performed, and examination results. When appropriate, documentation includes the following information:
 - a. Referral question and referral diagnosis
 - b. Relevant medical history
 - c. Relevant psychosocial history
 - d. Sources of information (e.g., patient interview, record review, behavioral observations)

- e. Procedures administered
 - f. Clinical decision making (See description in the section “Components of Neuropsychological and Psychological Evaluation” above)
 - g. Interpretation of test data and other clinical information (e.g., test results)
 - h. Integration of sources of information (e.g., summary and impressions)
 - i. Diagnosis
 - j. Treatment planning and recommendations
 - k. Date(s), billing codes, and amount of time of service
 - l. Legible signature of the provider
2. The administration of psychological testing and/or neuropsychological testing must result in the generation of material that will be formulated into a report. All Testing Evaluation services and Test Administration and Scoring services provided by the psychologist or QHP and technician must be documented in clearly understandable terms, and feedback provided for the benefit of referral sources and other reviewers.
 3. Documentation should be legible, signed, and maintained in the patient’s medical record. Upon request, it must be available to the payer.

Episode of Care over Multiple Dates of Service

It is typical for psychologist or QHPs to provide testing evaluation services (codes 96130-96133) and/or test administration and scoring services (codes 96136-96139) across multiple dates of service. This could include multiple testing sessions with test scoring, non-face-to-face time engaged in professional services and test scoring, and interactive feedback. When a service is spread out over multiple visits, the total cumulative time spent performing each type of service in the evaluation process (i.e., clinical/diagnostic interview, testing evaluation services, test administration and scoring, and feedback) should be reported at the completion of the entire episode of care (Centers for Medicare & Medicaid Services [CMS], National Correct Coding Initiative [NCCI] April 1, 2019 Change Report for Add-On Code Edit Changes; MLN Matters® SE17023 Guidance on Coding and Billing Date of Service on Professional Claims). The single bill should list both base and add-on codes with the different dates of service linked to the entire episode of evaluation. A single base code should only be submitted for the first unit of each type of service of the evaluation process. Only add-on codes should be used to

capture subsequent units of service on the same or different days.

The episode of care concludes when the evaluation report is complete and interactive feedback is provided. Interactive feedback with the patient and/or family member(s) and caregiver(s) is a component of the evaluation process under most circumstances. When additional intervention services with the patient and/or family member(s) and caregiver(s) are required, more extensive than feedback, those services should be considered a new episode of care and billed according to the service provided.

Important notes regarding proper reporting and billing for an entire Neuropsychological or Psychological Assessment episode of care over multiple dates of service:

- CPT® codes are reported based on the cumulative time spent performing each individual service category (i.e., clinical interview, testing evaluation services, and test administration and scoring) even if time occurs on the same or different dates of service. Time spent performing the activities associated with each service category is cumulative over the entire episode of care, but the activities in each service category do not necessarily happen chronologically.
- For each service category provided, time is cumulated over the episode of care based on the time stated in the CPT® code descriptors.
 - › Test administration and scoring services are cumulated in 30-minute increments
 - › Neurobehavioral status exam and Testing evaluation services are cumulated in 60-minute increments
 - › Psychiatric diagnostic evaluation (code 90791) is an untimed procedure and can be billed only one time for the service provided during a single encounter

Cumulated time is then converted to units of CPT codes reported. A single unit of a base code should be reported with multiple units (as needed) of the corresponding add-on code for the individual services performed. (See *Addendum for clinical examples and tips for proper documentation, coding and billing for episodes of care over multiple dates of service*, and link to CMS time rule guidelines)

UTILIZATION GUIDELINES

The CPT® codes in this Guide do not represent psychotherapeutic interventions but are diagnostic in nature. Each test performed must contribute meaningfully to the evaluation services for the condition being assessed.

Psychological or psychiatric evaluations performed on patients with psychiatric disorders that can be accomplished through the clinical interview alone (e.g., for some simple medication dose adjustments) would not require psychological testing, and such testing might be considered medically unnecessary.

With regard to neuropsychological and psychological evaluations, the combination of test administration and psychological/neuropsychological testing evaluation services will vary depending on a wide variety of factors including patient complexity, comorbidities, severity of medical condition(s) and other factors that drive the clinical decision making (See “Clinical Decision Making” above). A summary of any significant complicating factors, when present and relevant to instrument selection or clinical decision making, should be included in the clinical report, using simple straight-forward language to explain why the procedures were necessary in the particular case.

These neuropsychological and psychological evaluation codes include time for interactive feedback. Interactive feedback should be billed using the evaluation services codes. Of note, interactive feedback can be provided via telehealth or audio only.

If the time required to complete a single evaluation exceeds eight (8) hours, not including time for interactive feedback, medical necessity for extended testing time should be documented. If the testing is done over several days, the total time for the evaluation should be reported at the completion of the entire episode of the evaluation. The single bill should list both base and add-on codes with the different dates of service linked to the entire episode of evaluation. A single base code should only be submitted for the first unit of each type of service of the evaluation process. Only add-on codes should be used to capture subsequent units of service on the same or different days.

Typical Use of Test Administration/Scoring and Professional Evaluation Services Codes

Psychological and neuropsychological test administration and scoring services (codes 96136-96139) will always be reported with professional evaluation services (codes 96130-96133), and test administration/scoring will commonly require more time than related professional evaluation services, *not including time for interactive feedback*.

One typical ratio of Administration and Scoring with Professional Evaluation Services would be:

- Up to 5 hours of test administration/scoring to up to 3 hours of professional evaluation service time, not including interactive feedback, unless a rationale is provided to indicate otherwise

Notes:

This ratio represents a typical average that would not be required of every case, with more intensive and detailed cases (e.g., more comorbidities, more complexities with administration, extensive medical record review) requiring additional administration, scoring, and professional evaluation service time.

This ratio does NOT include the time associated with the neurobehavioral status examination/psychiatric diagnostic interview and interactive feedback sessions, which require additional time. The neurobehavioral status exam would be reported utilizing codes 96116/96121; the psychiatric diagnostic interview would be reported utilizing code 90791. If the neurobehavioral status examination exceeds 2 hours, medical necessity for extended time should be documented. Interactive feedback would be coded utilizing additional unit(s) of Professional Evaluation Services beyond this ratio.

Test administration and scoring services may be performed by a psychologist or QHP, by a trained technician under the general supervision of a psychologist or QHP, or by a combination of both the psychologist or QHP and the trained technician under the general supervision of the psychologist or QHP. This may include scoring services by the technician for test administration provided by the psychologist or QHP.

Even when utilizing technicians, many psychologists and neuropsychologists have incorporated test administration of at least several tests into their evaluation protocol, the medical necessity of which is determined by the complexity and degree of clinical decision making required. Therefore, both the psychologist or QHP and technician test administration and scoring codes (codes 96136-96139) can be used together to accurately document and report the time spent by each. (See information regarding modifier XE versus 59 in the section “Components of Neuropsychological and Psychological Evaluation” above)

There are cases in which a provider can administer and interpret standardized tests that can be used in both psychological and neuropsychological evaluations. In these cases, the psychologist or QHP should choose the code that is

the predominant service being provided. The psychological test evaluation codes (codes 96130-96131) and neuropsychological test evaluation services (codes 96132-96133) should not be billed together in the same episode of care.

If a computer test is given that does not require any supervision (i.e., psychologist or QHP or technician is out of the room) and has automated scoring, the actual administration time for the computer test would not be billed, but the time spent integrating this measure with other test results would be captured in the test evaluation services (codes 96130-96133) billed by the QHP.

SOURCES OF INFORMATION

- American Medical Association. *CPT® Assistant*. Coding communication: Central nervous system assessments and tests. November 2006. P.15.
- American Psychological Association, APA Task Force on Psychological Assessment and Evaluation Guidelines. (2020). APA guidelines for psychological assessment and evaluation. Retrieved from <https://www.apa.org/about/policy/guidelines-psychological-assessment-evaluation.pdf>
- American Psychological Association (2017). *Ethical principles of psychologists and code of conduct*. Effective date June 1, 2003 with amendments effective June 1, 2010 and January 1, 2017. Retrieved from <http://www.apa.org/ethics/code/>.
- APAPO (2014). Statement from an American Psychological Association and American Psychological Association Practice Organization work group on screening and psychological Assessment. Retrieved from <https://www.apaservices.org/practice/reimbursement/billing/assessment-screening>.
- Block, C., Johnson-Greene, D., Pliskin, N., & Boake. (2016). Discriminating cognitive screening and cognitive testing from neuropsychological assessment: Implications for professional practice. *The Clinical Neuropsychologist*, 31:3, 487-500.
- Board of Directors. (2007). American Academy of Clinical Neuropsychology (AACN) practice guidelines for neuropsychological assessment and consultation. *The Clinical Neuropsychologist*, 21, 209-231.
- Centers for Medicare & Medicaid Services. (2019). MLN Matters® SE17023 *Guidance on Coding and Billing Date of Service on Professional Claims*. Retrieved from <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNMattersArticles/downloads/SE17023.pdf>.
- Centers for Medicare & Medicaid Services. (2019). National Correct Coding Initiative (NCCI) Change Report for Add-on Code Edit Changes 04/01/2019 for Medicare. Retrieved from <https://www.cms.gov/Medicare/Coding/NationalCorrectCodInitEd/Downloads/Change-Report-Add-on-04012019.zip>
- Chaytor, N. & Schmitter-Edgecombe, M. (2003). The ecological validity of neuropsychological tests: A review of the literature on everyday cognitive skills. *Neuropsychology Review*, 13, 181-197.
- Finn, S. E. (1996). *Manual for using the MMPI-2 as a therapeutic intervention*. Minneapolis: University of Minnesota Press.
- Gure, T. R., Kabeto, M. U., Plassman, B. L., Piette, J. D., & Langa, K. M. (2010). Differences in functional impairment across subtypes of dementia. *Journals of Gerontology: Biological Sciences and Medical Sciences*, 65, 434-441
- Krishnamurthy, R., Hass, G. A., Natoli, A. P. Smith, B. L., Arbis, P. A., & Gottfried, E. D. (2022). Professional practice guidelines for personality assessment. *Journal of Personality Assessment*, 104(1), 1-16. <https://doi.org/10.1080/00223891.2021.1942020>
- Marcotte, T. D. & Grant, I. (Eds.). (2010). *Neuropsychology of everyday functioning*. New York: Guilford.
- Matarazzo, J. (1990). Psychological assessment versus psychological testing: Validation from Binet to the school, clinic, and courtroom. *American Psychologist*, 45, 999-1017.
- Meyer, G., Finn, S., Eyde, L., Kay, G., Moreland, K., Dies, R., et al. (2001). Psychological testing and psychological assessment: A review of evidence and issues. *American Psychologist*, 56, 128-165.
- Miller, L. R., Cano, A., & Wurm, L. H. (2013). A motivational therapeutic assessment improves pain, mood, and relationship satisfaction in couples with chronic pain. *The Journal of Pain*, 14(5), 525-537.
- Pegg et al. (2008). The impact of patient-centered information on patients' treatment satisfaction and outcomes in traumatic brain injury research. *Rehabilitation Psychology*, 50 (4), 366-374.
- Postal, K., & Armstrong, K. (2013). *Feedback that sticks: The art of communicating neuropsychological assessment results*. New York: Oxford University Press.
- Postal, K., Chow C., Jung, S., Erickson-Moreo, K., Geier, F., & Lanca, M. (2017): The stakeholders' project in neuropsychological report writing: A survey of neuropsychologists' and referral sources' views of neuropsychological reports, *The Clinical Neuropsychologist*. <http://dx.doi.org/10.1080/13854046.2017.1373859>
- Postal, K. S. The multigenerational family system in dementia assessment and management. In Ravdin LD, Katzen H. (Eds.) (2019) *Handbook on the Neuropsychology of Aging and Dementia* (Clinical Handbooks in Neuropsychology). New York, NY: Springer Publishing.
- Poston, J. M., & Hanson, W. E. (2010). Meta-analysis of psychological assessment as a therapeutic intervention. *Psychological Assessment*, 22(2), 203-212.
- Ravdin LD, Katzen H. (Eds.) (2019) *Handbook on the Neuropsychology of Aging and Dementia* (Clinical Handbooks in Neuropsychology). New York, NY: Springer Publishing.
- Roebuck-Spencer, T.M., Glen, T., Puente, A.E., Denney, R.L., Ruff, R.M., Hostetter, G., & Bianchini, K.J., (2017). Cognitive screening tests versus comprehensive neuropsychological test batteries: A National Academy of Neuropsychology education paper. *Archives of Neuropsychology*, 32, 491-498.
- Sbordone, R. J & Long, C. J. (1996). *Ecological validity of neuropsychological testing*. New York: CRC Press.
- Smith, J. D., Eichler, W. C., Norman, K. R., & Smith, S. R. (2015). The effectiveness of collaborative/therapeutic assessment for psychotherapy consultation: A pragmatic replicated single-case study. *Journal of Personality Assessment*, 97(3), 261-270.
- Society for Personality Assessment Board of Trustees. (2006). Standards for education and training in psychological assessment: Position of the Society for Personality Assessment. *Journal of Personality Assessment*, 87, 355-357. doi:10.1207/s15327752jpa8703_17
- Stilley, C. S., Bender, C. M., Dunbar-Jacob, J., Sereika, S., & Ryan, C. (2010). The impact of cognitive function on medication management: Three studies. *Health Psychology*, 29, 50-55.
- Temple R. O., Carvalho, J., & Tremont, G. (2006). A national survey of physicians' use of and satisfaction with neuropsychological services. *Archives of Clinical Neuropsychology*, 21(5), 371-382.

- Westervelt, H. J., Brown, L. B., Tremont, G., Javorsky, D. J., & Stern, R. A. (2007). Patient and family perceptions of the neuropsychological evaluation: how are we doing? *The Clinical Neuropsychologist*, 21, 263-273.
- Wilson, B. A. (1993). Ecological validity of neuropsychological assessment: Do neuropsychological indexes predict performance in everyday activities? *Applied and Preventive Psychology*, 2, 209-215.
- Wright, A. J., Chávez, L., Edelstein, B. A., Grus, C. L., Krishnamurthy, R., Lieb, R., Mihura, J. L., Pincus, A. L., & Wilson, M. (2021). Education and training guidelines for psychological assessment in health service psychology. *American Psychologist*, 76(5), 794-801. <https://doi.org/10.1037/amp0000742>
- Wojtasik, V., Olivier, C., Lekeu, F., Quittre, A., Adam, S., & Salmon, E. (2009). A grid for precise analysis of daily activities. *Neuropsychological Rehabilitation*, 20, 120-136.