

Capacity Assessment: Clinicolegal, Psychosocial, and Ethical Caveats

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INTRODUCTION

Capacity assessments are formally executed, standardized, and objective evaluations of specific abilities, integral for high-stakes clinical and forensic applications. A capacity assessment is vital in forensic matters related to personal injury litigation, disability determination, and insurance policy benefits eligibility and settlement payouts and when answering legal questions regarding mental status or guardianship, or suspicion of undue influence. Capacity evaluations are intended to measure the skills that underlie both basic and high-level human functions such as decision-making, financial management, writing a will, or performing specific activities essential for self-care, housekeeping, returning to work, or driving. Capacity deficits caused by neurocognitive and behavioral changes following brain injury such as diminished self-awareness, a failure to learn from mistakes, an unprecedented pattern of unwise decisions, or other problems with executive functioning have the potential to limit independence and cause real-life consequences.¹

At the most fundamental level, it is the persistence of post-injury deficits and specific behavioral, cognitive, and emotional changes that arouses legal and practical questions by family or medical providers regarding the brain injury survivor's capacity to function safely and independently. Ultimately, the objectives of a capacity evaluation are to provide data and opinion regarding an individual's residual ability to function adequately and safely with consideration given to preserving personal rights and freedoms in the least restrictive environment.²

CAPACITY BASICS

What Is a Capacity Assessment?

Capacity assessments are used in administrative and legal arenas to inform decisions regarding competency. These assessments help determine the degree to which the individual can meet eligibility standards or specific legal requirements for making personal, medical, and financial decisions;

driving; carrying a firearm; or even consenting to sexual relations. Capacity assessments are formally executed, objective, and standardized. The qualification and quantification of change and the diminution of functioning secondary to acquired brain injury (ABI) such as traumatic brain injury (TBI) or stroke, as well as progressive neurocognitive disease, require a comparison standard. Both interindividual and population-based normative standards serve as the comparative benchmarks for reliably determining if deficits or improvements have occurred.^{2,3}

A strong impetus is required to justify the initiation of a capacity assessment. The examiner, typically a PsyD, PhD, or MD, is asked to measure benefit-driven disability criteria or provide evidence and opinion regarding mental, cognitive, physical, and emotional status. Capacity assessment is warranted in forensic matters related to disability determination, insurance policy benefits eligibility, personal injury litigation, mental status, or guardianship, and to rule out undue influence.

The American Psychological Association (APA) *Handbook of Forensic Neuropsychology* specifies that the examiner (a) become knowledgeable about case specifics, and clinical and medical history; (b) collect information from key personnel and family; and (c) conduct a valid and reliable measurement of physical, behavioral, cognitive, and emotional status.⁴ The results inform professional opinion regarding the nature and severity of any such impairments, and the degree to which identified impairments impact specific areas of functioning.⁴ The examiner renders an opinion on the most likely etiology/etiologies for any identified impairment; the degree to which psychiatric or cognitive impairment impacts daily functioning; any inconsistencies between the examinee's functional activities and measured capacity; and a rationale for needing substantial oversight and the degree to which it is necessary.⁵

Capacity or Competency?

Within the context of legal decision-making, the terms *capacity* and *competence* are often used interchangeably. While related, there are, however, important legal distinctions between these terms—each with specific implications.⁶⁻⁸

TABLE 87.1 Potential Behavioral, Cognitive, and Emotional Indicators of Incapacity Following Acquired Brain Injury

BEHAVIORAL	COGNITIVE	EMOTIONAL
Delusions	Premorbid cognitive deficits	Premorbid emotional or personality disorder
Hallucinations	Mental or developmental deficiency	Mental illness
Poor grooming/Hygiene	Memory impairment	Significant emotional distress
Impulsivity/Disinhibition	Rapid forgetting	Depression
Illegal activities	Disorientation/Delirium	Anxiety
Substance abuse/Dependency	Sensory impairment	Lability or mood swings
Physical disability	Poor topic maintenance	Inappropriate or inconsistent self-expression
Impaired instrumental activities of daily living	Communication problems	Posttraumatic stress disorder
	Comprehension problems	
	Lack of mental flexibility	
	Calculation problems	
	Medication management problems	

Source: Expanded From American Bar Association Commission on Law and Aging & American Psychological Association. *Assessment of Older Adults with Diminished Capacity: A Handbook for Lawyers*. American Bar Association and American Psychological Association; 2005.

Legal incapacity is equivalent to incompetence. In medical decision-making ventures, capacity implies having enough cognitive ability to make informed treatment decisions, that is, to appreciate risk versus benefit and understand the consequences of a choice. Mental capacity is presumed, unless disproved or challenged. If a person lacks decision-making capacity, it is essential to establish when, if, and how it can be regained or accommodated, and the likely time frame.¹

Competency, on the other hand, is a legal status ultimately determined by a judge that refers to the individual's ability to make decisions independently. Competence is a threshold requirement, imposed by law for the benefit of society and necessary for an individual to retain decision-making power and participate in a specific activity or set of actions.⁹ For example, competence refers to the degree to which one is considered legally capable of making personal and health care decisions such as managing one's care, giving consent to undergo a medical procedure; making decisions regarding finances (e.g., make large purchases, grant gifts, select investments, write a will); or possessing the skills needed to drive.

Diagnosis is not an indication of the loss of capacity.¹⁰ The behavioral, cognitive, and emotional changes following brain injury, if persistent, will warrant quantification and qualification when questions regarding capacity or competency are raised. Table 87.1 identifies probable behavioral, cognitive, and emotional signs of incapacity following ABI. Each of these factors is potentially modifiable by means of treatment in some cases, physical assistance, guardianship, organizational tools, augmentative communication tools, or additional recovery time.

Distinguishing Mental and Cognitive Capacity

Capacity is task- and context-specific and can fluctuate over time. *Mental capacity* is complex, multidimensional, and affected by many factors. Mental incapacitation may result from a multitude of reasons, including cognitive impairment, psychosis, alcoholism, or severe developmental disabilities.¹¹ Mental capacity is qualifiable and should

be formally assessed. A person may lack mental capacity if they are unable to understand information about a decision, remember the information, or use the information to decide and communicate preferences. A person may be judged to lack mental capacity for a limited period, temporarily, or permanently. Most people with a mental illness do not lack mental capacity: Moreover, making a wrong decision does not mean that a person lacks mental capacity. Furthermore, being unwell or having a mental illness does not mean that mental capacity is lacking.

Cognitive capacity is dependent on the quality and condition of cognitive functioning. Cognitive capacity is best assessed by (a) interviewing, observing, and interacting with the examinee; (b) obtaining and analyzing collateral data; (c) medically examining brain functioning and psychiatric status; (d) neuropsychological testing; and (e) functional assessment.¹² Cognitive testing informs the capacity evaluation but does not take its place. Doing poorly on cognitive tests does not necessarily indicate incapacitation. Conversely, doing well on cognitive testing does not mean one has the capacity to function reasonably independently, or well, as there are causes beyond cognitive deficits that can render an individual incapacitated.

From a legal perspective, Pickard¹³ describes personality disorder as an enduring tendency of the mind that is maladaptive and a pattern of behavior that is difficult to change, or the result of brain dysfunction. Personality disorder following brain injury has been associated with self-harm, suicidal behavior, as well as criminal offenses and violence toward others.¹³ Unlike schizophrenia or mood disorders, a personality disorder is not an illness or disease, nor is it typically marked by psychotic thinking or delusions. Personality disorders do not typically fall under the M'Naghten rule and meet the criteria for insanity. This "test" was established by the English House of Lords in the mid-19th century as grounds for insanity. To prove insanity, it is necessary to show that the accused was suffering from a "defect of reason, disease of the mind" at the time of the offense, as to not know or understand the nature and the quality of the act they were committing or did not know it was wrong.¹⁴

When Is a Capacity Assessment Prudent and Necessary?

Capacity assessments have become increasingly sought after in matters of the court, particularly when questions regarding an individual's ability to make independent decisions about medical care, financial transactions, driving, or testamentary capability are in question and necessitate objective measurement, behavioral data, and professional expertise.^{6,7,15} Capacity assessments are requested for matters related to personal injury litigation; disability determination; insurance benefit payouts and for long-term care; decisions regarding the individual's ability to function autonomously versus the need for protection or guardianship; and to establish mental status at the time of an alleged criminal activity. Attorneys may require a capacity assessment to assist with the legal determination (a) of a person's need for guardianship, (b) of

their ability to stand trial, (c) to affirm or refute capacity, or (d) to justify the retention of freedom or rights (e.g., right to vote, carry a firearm, consent to sexual activities, marry, or drive). Capacity assessment is often the preferred nucleus of an independent medical/neuropsychological examination and an increasingly more common requisite before long-term health care or disability benefits can be released.¹⁶

Failure to assess capacity has been asserted as grounds for legal malpractice by would-be beneficiaries.¹² Questions that warrant assessment include whether and to what extent the individual has the ability to (a) accept and refuse treatment (*medical decision-making capacity [MDC]*), (b) make a will and understand its value and consequences (*testamentary*), and (c) understand and make reasonable decisions about money and finances (*financial capacity*). See Table 87.2 for redacted case descriptions of referrals for capacity assessment.

TABLE 87.2 Examples of Capacity Assessment Scenarios

CAPACITY ASSESSMENT SCENARIOS			
COMPLEX MEDICAL, PSYCHIATRIC, CULTURAL, AND NEUROLOGICAL ISSUES			
BACKGROUND		REASON FOR REFERRAL	CLINICAL, LEGAL, AND PSYCHOSOCIAL CAVEATS
Age	AK, a 31-year-old male with a history of premorbid neuropsychiatric and behavioral issues sustained severe TBI secondary to motor vehicle accident while on the job.	Referred by attending MD and WC case manager to answer questions about long-term medical decision-making capacity, financial capacity, potential for undue influence, and recommendations regarding guardianship.	Family discord, premorbid history of substance abuse, poor self-awareness.
Gender			
Degree and mechanism of injury			Markedly variable cognitive status.
Premorbid factors			Patient has a litigious coping style and volatile behavior.
Treatment course			
Cognitive status			Family has exhausted their emotional and financial resources.
Psychosocial and legal issues	AK is currently receiving WC benefits. The family is seeking full access to the patient's finances.		
Age	KN, a 42-year-old female, born in South Korea, emigrated to the United States 3 years prior to a severe TBI sustained from a work-related fall injury.	Referred by attorney following the family's petitioning of the court for access to her benefits and insurance settlement funds.	Cultural and language barriers.
Gender			Family discord.
Degree and mechanism of injury			Family members show coercive behaviors and possible undue influence.
Premorbid factors			
Treatment course		To what extent is she capable of self-care, driving, and medical and financial decision-making? Is there an indication of undue influence?	Patient remains dependent for self-care and financial management.
Cognitive status			
Psychosocial and legal issues			The family is no longer invested in monitoring her behavior or in providing long-term shelter and care.

(continued)

TABLE 87.2 Examples of Capacity Assessment Scenarios (*continued*)

BACKGROUND		REASON FOR REFERRAL	CLINICAL, LEGAL, AND PSYCHOSOCIAL CAVEATS
Age	JS, a 30-year-old female who sustained severe TBI and expressive aphasia following a self-inflicted gunshot wound to the left frontal lobe. The extensive damage required a left prefrontal lobotomy.	Referred by attorney for independent examination of capacity to determine quantification and qualification of mental and cognitive status, assessment of medical decision-making, and financial capacity.	Pre-injury psychiatric disorders.
Gender			Frontal lobe disruption secondary to severe damage and requisite prefrontal lobotomy.
Degree and mechanism of injury			Expressive aphasia and poor self-awareness. Poor planning.
Premorbid factors	This patient had a preexisting history of depression and suspected bipolar disorder.	Recommendations for immediate and long-term care needs are requested.	Severely impaired verbal expression.
Treatment course	She was placed in a skilled nursing facility for extended care. Cognitive status is moderately impaired.		She is requesting increased independence and access to her family inheritance. There is no viable family support.
Cognitive status			
Psychosocial and legal issues	No immediate family members are alive and extended family members are declining involvement in her care.		
DEMENTIA, PSYCHIATRIC COMORBIDITIES, AND MEDICAL COMPLEXITY			
Age	RA, a 74-year-old, deceased male with a history of TIAs, stroke, hypotension, hypothyroidism, and depression underwent recurrent meningioma resection due to metastatic brain cancer resulting in progressive cognitive decline. Before his cancer, he maintained ownership and operation of a \$36 million real estate enterprise.	Attorney for the defense referred this gentleman for postmortem independent retrospective testamentary capacity examination to determine if he had the capacity to make and later amend a will and trust at the time, and opinion regarding undue influence.	History of fluctuating neuropsychological and medical status.
Gender			No record of prior face-to-face neuropsychological or psychiatric examination of the patient is available, other than brief 15-minute office visits to primary care physician and observations. Only record review, application of neuropsychological principles, retrospective interpretation of capacity, and collateral interview are available to conduct a retrospective (postmortem) testamentary capacity examination.
Degree and mechanism of injury			
Premorbid factors			
Treatment course	He remarried following the execution of his original will. Shortly before his death, his second wife accompanied him to amend the existing will. He became increasingly dependent on his second wife for care.	Referred by her long-term insurance carrier policy for independent medical and neuropsychological examination of capacity to determine if she meets policy criteria for long-term care and to what extent supervision and care are needed.	Minimal medical records, blended family dynamics and disagreements; signs of potential for undue influence and situational factors that make her vulnerable to exploitation.
Cognitive status			
Psychosocial and legal issues	His son and daughter are challenging the revision of the original will, claiming their father lacked testamentary capacity at the time the amendment was revised and are alleging undue influence.		
Age	MB, a 79-year-old female with a prior history of severe TBI and progressive cognitive decline.	Referred by her long-term insurance carrier policy for independent medical and neuropsychological examination of capacity to determine if she meets policy criteria for long-term care and to what extent supervision and care are needed.	Family alleges poor medical care and insufficient in-home supervision.
Gender			
Degree and mechanism of injury			
Premorbid factors	Family is attempting to gain access to her long-term care benefits as means to pay for her personal care. She is living at home with her spouse but requires 24-hour supervision.	The long-term insurance policy contains many limitations and stipulates that an independent neuropsychological examination be undertaken to determine etiology, assessment of cognitive status, and documentation of the extent to which she needs care and supervision.	
Treatment course			
Cognitive status			
Psychosocial and legal issues			

(continued)

TABLE 87.2 Examples of Capacity Assessment Scenarios (*continued*)

BACKGROUND		REASON FOR REFERRAL	CLINICAL, LEGAL, AND PSYCHOSOCIAL CAVEATS
Age	TP, a retired professional sports player with a history of multiple concussions, now 58 years old, shows indication of progressive cognitive decline, possible chronic traumatic encephalopathy, and depression.	The attorney for this defendant requests an independent capacity assessment for differential diagnosis of neurological versus psychiatric disorder for use in criminal proceedings and possible insanity defense.	Repeated sport-related concussions and subsequent progressive cognitive decline.
Gender			
Degree and mechanism of injury			Family history is positive for dementia.
Premorbid factors			Pending criminal charges will warrant courtroom testimony.
Treatment course			
Cognitive status	He complains of memory lapses and slow processing speed.		The prosecuting attorney is seeking extended incarceration.
Psychosocial and legal issues	The defendant hopes that the results may exonerate him based on incapacity due to insanity.		

MD, medical doctor; TBI, traumatic brain injury; TIA, transient ischemic attack; WC, workers' compensation.

Types of Capacity Assessments

Contemporaneous and Retrospective Assessments

Evaluations of capacity may be conducted in the present or be retrospective assessments of how capable an individual was presumed to have been at the time of the financial transaction or illegal act. Regardless of the assessment's temporality, a capacity assessment must include an estimate of the examinee's premorbid ability in order to draw meaningful conclusions about the degree of deficit and in order to form an opinion regarding the likely effects of that deficit on the individual's ability to make a choice, understand, appreciate, and reason.⁹ Testamentary capacity assessment may be conducted in the present (contemporaneous) or assessed retrospectively, sometimes posthumously, that is, after the death of the testator. A retrospective testamentary capacity assessment is an opinion regarding a person's ability to make or change a will at the time it was executed. The concept of testamentary capacity has been described as having a "sound mind" and memory. Postmortem evaluations are commissioned to ascertain the degree to which a deceased individual possessed the capacity to perform a specific action or make a decision such as execute a will, grant a monetary gift or a donation, or amend a previously held agreement. In these instances, the evaluator must depend on a comprehensive record review, collateral interviews, and retrospective assessment of capacity and mental status. By law, a person who has reached the age of majority can make a will, and a person who has a mental disorder can make a will provided they have the required capacity.¹⁷ Testamentary capacity requires the ability to comprehend, agree, and appreciate (a) the nature and extent of their property, (b) the persons who are the natural and intended beneficiaries of their property or wealth, and (c) the dispositive effect of executing the will. Those who would challenge an executed will must demonstrate that the testator (or testatrix) did not know or appreciate the scope and consequence of the will at the time it was executed.

Civil and Criminal Capacity Assessments

When individuals lack capacity, it is more likely than not due to a mental deficit, such as a cognitive vulnerability, or severe mental illness marked by psychosis or mood instability. In many cases, these deficits are amenable to treatment and can be overcome with a medical, psychological, or psychiatric intervention.¹³ Civil cases that warrant the inclusion of a capacity assessment are those that begin when a person or entity (plaintiff) claims that another person or entity (the defendant) has failed to carry out a duty owed to the plaintiff. The plaintiff may ask the court to tell the defendant to fulfill the duty or make compensation for the harm done, or both. Legal civil cases usually involve private disputes between persons or organizations.¹⁸ Civil suits are brought in both state and federal courts. An example of a civil case in a state court would be that of a citizen (including a business entity) suing another citizen for not living up to a contract. Individuals, corporations, and the federal government can also bring civil suits in federal court claiming violations of federal statutes or constitutional rights. For example, the federal government can sue a hospital for overbilling Medicare, a violation of a federal statute. An individual could sue a local business for violation of their constitutional rights, for example, the right to carry a gun to protect oneself or to assemble peacefully. Grisso¹⁹ maintains that mental health professionals should address but not answer the question of legal competency. While the medical examiner or psychologist may provide an opinion regarding competency, the ultimate decision rests with the court.

Comparatively, criminal cases involve an action that is harmful to society, offenses against the "state," or the mishandling of rights established under the constitution or federal or state law. The government, on behalf of the people of the United States, prosecutes federal crimes through the U.S. Attorney's office. A state's attorney's office (District Attorney) prosecutes state crimes. Some criminal competency questions can be raised retrospectively; that is, questions

regarding a person's mental and cognitive status at the time a crime was committed may become the focus of a capacity examination. U.S. law holds that individuals have a right to know what they are accused of, to have a defense attorney if they so choose, and to assist their attorney in their defense. Individuals who cannot rationally and factually understand their charges or the proceedings against them or who do not possess a reasoned ability may not be fit to stand trial.¹⁸

KEY ELEMENTS IN CAPACITY ASSESSMENT AND INTERPRETIVE NUANCES

A thorough capacity examination of cognitive and mental status measures intellectual functioning, attention/concentration, executive functioning, language skills, visuospatial functioning, learning and memory functioning, mood, personality, and motor skills. When conducting this type of forensic neuropsychological evaluation, the examiner is asked to review all available clinical and claim records; conduct a comprehensive interview of the claimant; assess the individual's occupational history and current functional activities; administer neuropsychological tests to measure cognitive and mental status; and assess symptom and performance validity testing (SVT, PVT) using at least two empirically supported, stand-alone measures of cognitive symptom validity, and consider embedded measures.¹⁹⁻²¹ Symptom and performance validity measures are the expected inclusion standard for all neuropsychological evaluations and remain an essential component of forensic and medicolegal examinations.^{4,21,22} Such tests examine the probability that the examinee gave full effort, and help establish whether the results are valid, that is, were not obscured by a tendency to fake bad, fake good, or malingering.^{20,21,23} Modification to the standards and methodology for performance and symptom validity testing may be justified when dementia or significant intellectual disability is evident.¹⁵ Individuals with significant cognitive decline warrant special consideration when selecting tests and interpreting performance credibility.

Standard and acceptable measures of performance validity (e.g., Test of Memory Malingering; the Dot Counting Test; Word Choice Test), while appropriate for testing effort in older adults with mild cognitive impairment, may result in false positives for those with at least moderate to severe cognitive decline or dementia. Individuals with moderate to severe cognitive impairment due to TBI and other acquired or progressive causes of cognitive decline often fail stand-alone performance validity tests, not because of deliberate symptom dissimulation, but because the test inadvertently measures essential neurocognitive abilities that have been subject to diminishment as a result of brain damage.²²

Content and Organization of Neuropsychological Capacity Assessments

Unlike clinical evaluations, capacity evaluations are independent; therefore, they do not constitute a doctor-patient relationship. The purpose of the capacity assessment, findings, opinions, and answers to the questions asked by the referral source are components that should be incorporated into the report. Consistent with clinical neuropsychological

evaluations, capacity assessments should include a review and listing of all available records (medical, academic, vocational, legal), behavioral observations, and clinical interview of the individual whose capacity is in question, along with standardized measures and collateral interviews. See Box 87.1 for an example of format and content of a capacity evaluation.

The individual's legal name or use of the term "examinee" rather than "patient" is recommended for independent examinations.²⁴ Some long-term care insurance companies require the use of specific terms such as "customer" or "insured." All opinions should be stated clearly, explicitly, and with confidence. Hedge words like "I think" and "I believe" should be avoided in forensic and medicolegal reports.²⁴ Legal certainty is defined as "more likely than not" or as "within a reasonable degree of medical or neuropsychological probability." Explanations about the reasons why conclusions were drawn regarding capacity should be given and in-text citations included with a reference list to follow the report.

Neuropsychological/Psychological Tests Used in Capacity Assessments

Assessments should be comprehensive evaluations of neuropsychological and behavioral functioning. They should be honest, data-driven, and practical in that they answer the referral questions in a relevant, accurate, defensible, and practical way. For example, if the question to be examined is whether the individual can make testamentary decisions, then the assessment should include a valid and reliable measure of cognitive functioning and the degree to which the individual has the ability to perform the tasks under question. See Table 87.3 for a list of the more efficient and commonly used assessment measures in forensic neuropsychological capacity examinations. The list does not include measures that are exclusive to pediatric populations, but rather formal tests appropriate for persons who have reached the age of majority (adolescents and adults).

INTERPRETIVE PROVISOS FOR CAPACITY ASSESSMENTS FOLLOWING ACQUIRED BRAIN INJURY

Unlike capacity assessments for individuals with known progressive neurodegenerative diseases such as Alzheimer's disease, Lewy body disease, vascular dementia, or Parkinson's dementia, the cognitive decline or diminishment that occurs following TBI is not typically progressive. The recovery trajectory following TBI is uneven with rapid and spontaneous changes occurring early, generally within the first months to a year, and leaving a residual pattern of relative strengths and weaknesses that is best mediated by compensatory strategies.³ Specific functions may remain intact and relatively unchanged from premorbid levels or become exacerbated manifestations, while others may show impairment that ranges from mildly to severely and permanently impaired. For these reasons, the way we assess capacity following static injuries and specifically TBI must follow different principles. Variables such as age at injury, type of injury, degree of damage, the pattern of strengths

BOX 87.1 Integral Components of a Forensic Neuropsychological Capacity Assessment

Identifying Information (name, DOB, age, handedness, primary language, marital status, date of injury, date of evaluation, and time of face-to-face evaluation, in minutes, e.g., 9:01 to 3:47)

Background/Scope (general legal and clinical case description, brief executive summary; questions for the examiner; legal questions posed for clinical assessment; qualifications of the examiner [an optional inclusive paragraph or attach curriculum vitae])

Medical/Clinical/ Legal Records Reviewed (labeled by source and date, in chronological order)

Summary of Record Review (bullet point key elements or summarize content)

Sources of Information/List of Tests Used

History (preexisting and current)

- Developmental** (birth history, abnormal illnesses, high fevers, milestones)
- Medical** (pre-injury history, family medical history)
- Legal** (established patterns of illegal activity, arrests, substance and alcohol use or abuse)
- Educational/Vocational** (highest grade completed, repeated grades, academic records, special or regular education)

Collateral Interviews (behavioral and cognitive status reports from spouse; family; occupational, physical, speech therapists; MD; lawyer's notes regarding the client's demeanor during the execution of the will; and reports of significant legal or competency issues)

Clinical Interview of Examinee (observations, impressions, mental status, physical status, self-awareness, strengths, weakness)

Clinical Findings (qualitative and quantitative data, test scores, normative comparisons)

- Premorbid Functioning** (calculate premorbid IQ, describe the pattern of pre-injury functioning, occupational and educational achievements, family demographics)
- Symptom and Performance Validity** (criteria, results, norm references)
- Intellectual/Cognitive** (verbal comprehension, visual perception, visual and verbal problem-solving)
- Attention/Concentration** (immediate attention, ability to attend to visual and auditory information and sustain over time; ability to shift and divide attention)
- Sensory Perceptual/Motor** (include results of hearing and vision examination, dexterity, strength, speed, reaction timing, balance)
- Language** (speech production and intelligibility; fluency; naming; assessment of comprehension for written, spoken, or visual information; functional ability to express self in words; handwriting legibility; written and expressive language)
- Memory** (short term, long term, ability to retain new information, visual and auditory recall)
- Functional Academics** (basic math skills, word recognition, reading comprehension; written language)
- Executive Functioning** (ability to plan, demonstrate rational decision-making, prudence of judgment, ability to inhibit impulses and modify behaviors, self-awareness, changes from premorbid functioning)
- Mood/Personality** (premorbid and current)
- Functional Abilities** (ADLs, IADLs) (self-care, household, financial, occupational)

Case-Specific Capacities (e.g., ability to understand requisite legal terminology, read and sign a document, identify beneficiaries and extent of bounty)

Summary (clinical results) (include DSM and ICD diagnoses; distinguish any diagnoses that were preexisting)

Opinion (clinical judgment, analysis, integration, direct responses to questions posed to examiner based on "reasonable degree of medical certainty," or "reasonable degree of neuropsychological certainty," or "probability")

Recommendations (provide direct and relevant answers to questions regarding supervision, guardianship; provide a rationale that is tied to and supported by test results and history)

Signature (include degrees, board certifications, fellowships, date of signature)

References (include in-text citations and attach supportive reference list at the end of the report)

ADL, activity of daily living; DOB, date of birth; DSM, *Diagnostic and Statistical Manual of Mental Disorders*; IADL, instrumental activity of daily living; ICD, *International Classification of Diseases*.

and weakness, and time since injury impact interpretation, predictions regarding the potential for recovery, and the strategies most likely to offset impediments to capacity (see descriptions to follow). Comparison standards provide the requisite basis for interpreting change. Recommendations for strategies that may serve to mediate identified weakness should be included in the report.

1. Type/nature of injury. The mechanism of injury provides relevant information on which to base expectations for recovery or change. Cognitive status during the initial stages of acute injury warrants regular reexamination

and the consequent modification of prognosis, as well as the degree to which supervision is recommended. Disorders of language, perception, and praxis may result from a disruption to neuroanatomical systems that have been damaged due to brain lesions. The high incidence of diffuse axonal injury and damage to frontal and temporal regions predisposes problems with attention, memory, fatigue, behavioral regulation, and executive function.²⁵

2. Degree of injury. Degree of injury is associated with outcome and provides an approximation of impairment. Was the injury considered mild, moderate, or severe at the outset, and which cognitive functions continue to show

TABLE 87.3 Neuropsychological Tests Used to Assess Capacity in Adults

	AGE RANGE	TIME (MIN)
INTELLIGENCE/COGNITIVE FUNCTIONING/GENERAL IMPAIRMENT		
Brief Neuropsychological Cognitive Examination (Wechsler Memory Scale)	18+	25–30
Cognistat	12–92	15–30
Comprehensive Test of Nonverbal Intelligence (CTONI)	6–89	60
Dementia Rating Scale 2 (DRS-2)	55–89	30
Mini-Mental State Examination (MMSE)	18+	20
Montreal Cognitive Assessment (MoCA)	55–85	10
Neuropsychological Impairment Scale (NIS) TM	18–88	15–20
Reynolds Intellectual Assessment Scales (RIAS)	3–94	35
Shipley Intelligence 2	7–89	25
Saint Louis University Mental Status (SLUMS) Examination (Dept. of Veterans Affairs)	18	10
Wechsler Abbreviated Scale of Intelligence, Second Edition (WASI-II)	6–90	30
Wechsler Adult Intelligence Scale, Fourth Edition (WAIS-IV)	16–90	60–90
ATTENTION/CONCENTRATION		
Color Trails	18–89	8
Comprehensive Trail Making Test	8–74	15
Integrated Visual and Auditory-2 (IVA-2)	6–96	15
Paced Auditory Serial Addition Test (PASAT)	18–75	10–15
Stroop Color and Word Test	4–89	15
Trail Making Test A & B	18–89	5
VISUAL AND SENSORY PERCEPTION		
Beery-Buktenica Developmental Test of Visual-Motor Integration (Beery VMI)	2–100	15
Clock Test	20–94	5–10
Hooper Visual Organization Test (HVOT)	5–89	<15
Judgment of Line (JoLO)	7–74	15
Rey-Complex Figure Test (ROCFT)	6–89	45
Symbol Digit Modalities Test (SDMT)	8–89	<5
Rhythm Test	15–92	30
Smell Identification Test (SIT)	4–99	12
Speech Sounds Perception Test (SSPT)	9–92	15
Tactual Performance Test (TPT)	5–Adult	45
MOTOR FUNCTIONING		
Finger Tapping Test	6–69	10
Grooved Pegboard	5–70	10
Strength of Grip	6–Adult	5
MEMORY		
Benton Visual Retention Test (BVRT)	8–Adult	20
California Verbal Learning Test, Second Edition (CVLT-II)	16–89	30
Fuld Object Memory Test	65–90	15
Hopkins Verbal Learning Test-Revised (HVLTR)	16–80+	20–25
Brief Visuospatial Memory Test-Revised	18–79	45
Rey Auditory Verbal Learning Test (RAVLT)	7–89	15

(continued)

TABLE 87.3 Neuropsychological Tests Used to Assess Capacity in Adults (*continued*)

	AGE RANGE	TIME (MIN)
MEMORY		
Rey-Complex Figure Test (ROCFT)	6–89	45
Wechsler Memory Scale-IV	16–90	45–60
LANGUAGE		
Aphasia Examination—Halstead Reitan	Adult	20–30
Animal Naming (Fluency)	6–Adult	5
Boston Naming Test	5–Adult	15
Controlled Oral Word Association Test (COWAT)	6–Adult	5
Functional Communication Profile	3–Adult	45–90
Multilingual Aphasia Examination (MAE)	6–69	20–40
Receptive One Word Vocabulary	2–95	20
Sentence Repetition	8–79	20–30
FUNCTIONAL ACADEMIC SKILLS		
Gray Silent Reading Tests	7–25	15–20
Wechsler Individual Achievement Test, Fourth Edition (WIAT-4)	5–94	35–45
Woodcock–Johnson Tests of Achievement (WJ-TOA)	2–80	90
Wide Range Achievement Test, Fifth Edition (WRAT-5)	5–85	15–40
Wechsler Abbreviated Scale of Intelligence (WASI-II)	6–89	20–30
EXECUTIVE FUNCTIONING		
Category Test	15–89	60
Frontal Systems Behavior Scale (FrSBe)	18–90	15
Iowa Gambling Task	8–79	10
Stroop Color Word Test	5–89	5
Tower of London	7–80	15
Trail Making Test A & B	18–89	15
Trails X Test of Executive Functioning	18–97	30
Wisconsin Card Sorting Test	6.5–89	30
MOOD/EMOTIONALITY		
Beck Anxiety Inventory (BAI)	17–80	10
Beck Depression Inventory, Second Edition (BDI-II)	13–80	5
Geriatric Depression Scale (GDS)	55+	10
Mood Disorders Questionnaire	11–Adults	10
Zung Depression Scale	13–89	5
PERSONALITY/BEHAVIOR/COPING		
Brief Symptom Inventory	13–Adults	20
Clinician Administered PTSD Scale (CAPS)	7–90	45
Chronic Pain Coping Inventory	20–80	10–15
Millon Clinical Multiaxial Inventory (MCMI)	18+	30
Neuropsychiatric Inventory Questionnaire (NPI-Q) (informant)	18+	35–50
Minnesota Multiphasic Personality Inventory-Restructured Form (MMPI-RF)	18+	60–90
Personality Assessment Inventory (PAI)	18+	60

(continued)

TABLE 87.3 Neuropsychological Tests Used to Assess Capacity in Adults (*continued*)

	AGE RANGE	TIME (MIN)
PERFORMANCE AND SYMPTOM VALIDITY: MALINGERING		
The b Test	17+	5–15
Coin in the Hand Test	Adults	5
The Dot Counting Test	17+	5–15
Hiscock Forced Choice (or Digit Memory Test)	5–90	5
Rey 15 Item Test	8–Adults	10
Structured Inventory of Malingered Symptomatology (SIMS)	18+	10–15
Structured Interview of Reported Symptoms, Second Edition (SIRS-2)	18–100	30–40
Test of Memory Malingered (TOMM)	16–84	30
Victoria Symptom Validity Test	18–72	15–25
Word Choice Test	16+	20–30
PREMORBID FUNCTIONING		
ACS Test of Premorbid Functioning (TOPF)	20	20
National Adult Reading Test (NART)	20–70	20
Wechsler Test of Adult Reading (WTAR)	16–89	10
Adaptive Behavior		
Adaptive Behavior Assessment Scale	Birth–89	15–20
Texas Functional Living Scale	16–90	20–30
Independent Living Scales (ILS)	16+	20
Specialized Capacity Measures		
Aid to Capacity Evaluation (ACE)	18+	10
Capacity to Consent to Treatment Instrument (CCTI)	16+	15
Decision Making Instrument for Guardianship	16+	20–30
Financial Capacity Instrument (FCI-9)	16+	20
Hopemont Capacity Assessment Interview (HCAI)	16+	20–30
Hopkins Competency Assessment Test	16+	20–30
Inventory of Legal Knowledge	12–79	15
MacArthur Competence Assessment Tool-Treatment	16+	20
MacNeill–Lichtenberg Decision Tree (MLDT)	16+	5
Structured Interview for Competency/Incompetency Inventory	18+	20
Short Form of the Informant Questionnaire on Cognitive Decline in the Elderly (Short IQCODE)	16+	5–10

the most and least change at 2 to 3 years post-injury? The neurobehavioral consequences of moderate to severe TBI tend to be more extensive and persistent than those that result from mild TBI. Significant cognitive improvement is less likely at 2 or more years after a moderate to severe brain injury; however, modified or enhanced accommodations and supports remain necessary and viable means to mediate deficits and promote compensation.²⁶

3. Pattern of impairment. Results of neuropsychological assessment, record review, and collateral interview are sound sources of quantitative, qualitative, and data-driven information for discerning residual strengths and weaknesses and charting approximate anatomical location and patterns of impairment such as anterior or

posterior, left versus right hemisphere, and cortical versus subcortical. Residual strengths or spared functions provide the means to mitigate damage and offset functional liabilities. Persisting and potentially permanent deficits will command greater certainty regarding capacity, prognosis, predictions, and recommendations for long-term care and supervision.²⁷

4. Age at injury. Age is a strong prognostic factor following brain injury.²⁸ Most studies that predict outcomes are performed following severe TBI, whereas Dhandapani et al. included patients with mild, moderate, and severe TBI. For example, the preponderance of falls noted in older adults resulted in an age-related trend toward aggregate hematomas and larger lesions. The study concluded

that the influence of age on outcome was probably due to the decreased capacity of the adult brain for recovery as the brain ages. This phenomenon was the result of fewer functioning neurons and greater exposure to subclinical insults. In patients with TBI, increasing age was significantly associated with an unfavorable outcome at 6 months in a stepwise manner up to a threshold of 40 years, and was independent of other prognostic factors. Retrospective studies suggest an increased risk of cognitive and functional decline among older survivors of TBI. Furthermore, those who improved were more likely to be younger and less likely to abuse alcohol or use illicit substances.²⁹

5. Time since injury. Time since injury impacts the likelihood of change and reliability of clinical findings. Predictions regarding capacity are least reliable when made during a period of rapid change. Once medically stable and initial physiological conditions such as neurochemical alterations, edema, elevated intracranial pressure, vascular disruption, and ischemia have abated, the nervous system can begin the process of repair.^{25,26} Recovery curves are useful means to couch recommendations regarding long-term needs. Recovery following ABI is most rapid in the first 3 to 6 months. The recovery curve then follows a progressively slower pace; however, recovery may continue for several years post-injury. As the rate of change becomes progressively slower, the rationale for supervision and specific therapeutic supports becomes more reliable.²⁵

In a 6-month longitudinal study of financial capacity following TBI,²⁶ different degrees of impairment were noted for financial capacity based on time since injury and degree of impairment. The Financial Capacity Instrument²⁷ was used to measure specific financial and monetary skill sets. Immediately following acute injury, persons with moderate to severe TBI showed global impairment for financial capacity. Improvement of both simple and complex financial skills over 6 months occurred. However, persistent impairment prevailed for more complex financial skills

such as understanding financial concepts, checkbook management, bank statement management, bill payment, assets and estate arrangements, and investment decisions.

6. Need for comparison standards. Assessment of change requires comparison standards such as normative population-based or individual and intraindividual comparison models. Normative standards are necessary to compare the individual's performance with population-based averages for cognitive performance, emotions, or behaviors. Individual comparison standards refer to comparisons to other individuals based on gender, age, race, or other, whereas intraindividual comparisons are differences observed within the same person (relative strengths and weaknesses). Attention or effort indices provide good examples of intraindividual differences.^{30,31} Patterns of neuropsychological dysfunction may be used to implicate site of damage or neuroanatomical regions and can help to distinguish among different causes of brain injury).^{2,25,32}
7. Need for compensatory recommendations. All individuals with health impairments are entitled to care as well as assessment and treatment of modifiable factors that impede capacity such as hearing loss, grief, malnutrition, educational limitations, lack of family support, and physical disability. Optimally, a capacity assessment following ABI will identify specific strategies that may be used to mitigate identified deficits to offset lost functions and protect the individual's autonomy. Accommodations can improve capacity by expanding the means and ability to express preferences, better understand the complexities of decision-making, and express a rational choice. For example, medical and psychological treatments may be introduced to mitigate specific impediments to full capacity, such as a psychotropic medication, pain management, cognitive retraining, specific compensatory techniques, physical assistance, memory strategies, written cuing, behavioral intervention, substance abuse treatment services, and legal guardianship. See Table 87.4 for potentially modifiable factors that can impact capacity.

TABLE 87.4 Temporary and Modifiable Factors That Can Impact Capacity With Potential Accommodations

TEMPORARY AND MODIFIABLE FACTORS	POTENTIAL ACCOMMODATIONS
Stress	Increased social and psychological support
Grief	Supportive treatments, additional time to resolve
Vision and hearing impairments	Sensory evaluation and correction
Speech impairment (aphasia)	Speech/language evaluation and augmentation
Motor impairment (hemiparesis, writing illegibility, slow motor speed, dexterity)	Physical accommodations or modified expectations
Sleep disturbance, fatigue	Sleep study and treatment as recommended
Financial incapacity	Durable powers of attorney; trusts; joint checking accounts; direct deposit; automated monitoring of credit card transactions; legal guardianship
Cultural/ethnic variables	Consideration for the role of culture and multicultural sensitivity; family involvement, adjustment of expectations
Pain, persistent medical conditions	Evaluation and treatment
Lack of social support	Family intervention, community-based support
Undue influence	Involvement of social service agency

Whole-Person Capacity Assessment

Person-centered principles applied in psychology have tremendous value when used to conceptualize and conduct capacity assessments following cognitive decline.³³ Whole-person assessments deliberate not only the etiology and discernment of deficits but also the long-standing facets of a person's story, personality, values, and pre-injury lifestyle. An appreciation for the individual is necessary to understand and better predict preferences when personality or cognitive changes make it challenging to discern otherwise.³³ The principles of whole-person capacity assessment are applicable following ABI because of the increased likelihood of residual disruption to an individual's ability to express, reason, and appreciate. For those who no longer maintain the same degree of cognitive and psychological acumen as they once had, former patterns of behavior and preferences may serve as potential predictors of future financial decisions, preferences for a guardian, and preferred living arrangements.³⁴

Neuropsychological Assessment of Driving Capacity

Questions regarding the "if or when" a person can return to driving following ABI are common—and for good reasons. Neurological injury such as TBI, stroke, and related conditions often spur questions regarding driving capacity because driving safety is dependent on the very cognitive, physical, visual perceptual, and sensorimotor abilities that are especially vulnerable following ABI.³⁵ Driving safety requires adequate cognitive and psychological skills, as well as self-awareness regarding one's own driving abilities.³⁶ The assessment of an individual's capacity to drive requires a multidisciplinary approach.³⁶ A thorough evaluation should specifically assess sensory and physical functioning, medical history to include pharmacological prescriptions, psychological status, cognitive ability, knowledge of driving

rules and regulations, and the functional ability to operate a vehicle.^{35,37} The examiner must also weigh residual abilities against the standards for maintaining a driver's license as mandated by the state of residence.

The neurological conditions known to impact driving capacity include cerebrovascular accidents, TBI, Parkinson's disease, multiple sclerosis, epilepsy, sensory impairment (visual, hearing disability), and dementias.³ Medications (anticholinergics, anticonvulsants, antidepressants, antihypertensives, antipsychotics, sedatives, muscle relaxants, narcotic analgesics, stimulants, illicit drugs, medical marijuana) and intoxicants, both individually and interactively, can negatively impact alertness, vigilance, reaction timing, and judgment.³⁸ Certain psychiatric disorders that are severe or involve acute psychosis can negatively impact driving. Comorbid health conditions can also alter driving acumen when cognition, sensory, or motor deficits are impacted.

Ponsford and colleagues²⁸ and Wolfe and Lehockey³⁵ recommend that driving and driving assessment be suspended for several months after a neurological injury. Consensus recommends that the evaluation include (a) motor-sensory assessment (vision, hearing, strength, sensation, range of movement, coordination of arms and legs, neck and trunk, and mobility); (b) assessment of cognitive functioning (ability to sustain and divide attention, track, and scan; information processing speed; orientation; memory; impulsivity; planning; judgment; decision-making; self-awareness; and monitoring); and (c) analysis of emotional control. See Table 87.5 for tests used to measure driving capacity. Predictive screening tests and cutoff scores that indicate an individual is more than likely unsafe to drive include Mini-Mental State Examination <24; Montreal Cognitive Assessment <18; Trail Making B—3 or more errors or >180 seconds; Trail Making A >50 seconds.³⁹ The Driving Scenes Test within the Neuropsychological Assessment Battery also shows a strong relationship between scores and on-road driving test scores. This subtest was able to classify 66% of the participants into three categories correctly, namely, safe, marginal, and unsafe.⁴⁰

TABLE 87.5 Predictive Neuropsychological Screening Tests Used to Measure Driving Capacity

FUNCTIONS CRITICAL TO DRIVING CAPACITY AND FITNESS	PREDICTIVE SCREENING TESTS TO MEASURE CRITICAL FUNCTIONS FOR DRIVING
Attention	Subtests of the Wechsler Intelligence Scale (Arithmetic, Digit Span); Wechsler Memory Scale (Verbal Paired Associates, Logical Memory, Mental Control); Trail Making Test B; Paced Auditory Serial Attention Test
Processing speed	Trail Making Test A & B; Digit Span; Symbol Digit Modalities Test-Oral version; Stroop Word Reading subtest
Language	Road Sign Recognition Test; Boston Naming Test; Verbal Fluency (Animals); Wechsler Similarities and Comprehension subtests
Memory	Wechsler Memory Test (Logical Memory, Visual Reproduction); Hopkins Verbal Memory Test; Benton Visual Memory Test; Brief Visuospatial Memory Test-Revised
Executive functioning	Trail Making Test B; Complex Reaction Time Test; Continuous Performance Test-Integrated Visual and Auditory Test-IVA-2; Frontal Systems Behavioral Evaluations (pre- and postratings from family and self)
Self-awareness	Self-Awareness of Deficits Interview; Awareness Questionnaire; Driving Awareness Questionnaire; Depression and Anxiety inventories; personality assessment measures
Driving-specific skills	Driving Scenes Test of Neuropsychological Assessment Battery; Rookwood Driving Battery; Stroke Driver Screening Test; DriveWise

SOCIAL TRENDS AND CLINICAL AND LEGAL CAVEATS

Competency is necessary when discerning entitlements, restoring individual rights and freedoms, and assessing the likelihood of susceptibility to undue influence. Answers to questions about competency are essential when a determination must be made regarding the degree to which brain injury may have altered the individual's ability to make changes to a will or execute a contract. Social trends such as an increasing life span, an aging society, blended families, intergenerational wealth accumulation, and greater accessibility to legal options for transferring wealth can give rise to social conflict escalation. By 2030, estimates indicate that the average life span for men increases from the current life expectancy of 76.1 to 79.51 and for females from 81.1 to 83.32 (data.oecd.org/healthstat/life-expectancy-at-birth.htm).

Blended families or stepfamilies are prone to multiple within-family loyalties. Members can hold assorted perceptions about alliances that can result in inherent power imbalances or disagreements about multiple issues, including the voracity of the survivor's residual abilities or who should be ultimately responsible for decision-making. Conflicts are liable to arise when ultimate decisions about financial responsibility, expenses, wealth transfer, immediate care, and long-term supervision are pending.

Undue Influence

Undue influence refers to the use of mental, emotional, or physical coercion to adversely manipulate the free will or judgment of a vulnerable adult and cause them to act in a manner that is inconsistent with their financial, emotional, mental, or physical well-being.^{33,34} Undue influence implies that one person or persons have taken advantage of a position of power over another person. Undue influence is a pattern of behavior or a process and not a single event.³³ The process unfolds wherein the influencer gains control over the decisions that were formerly made by the individual during a time when they were less susceptible. It is widely accepted that circumstantial evidence does and should play a significant role in determining undue influence as there is rarely unequivocal proof or one definitive incident (e.g., a specific event or a taped conversation) that confirms unjustified influence.³³

Undue influence, when proven, can be grounds for nullifying a will or invalidating a gift. Undue influence is the rightful subject of will contests and the common reason for a capacity challenge. Most jurisdictions place the burden of proving undue influence on the party challenging the will. Evaluators performing assessments regarding the suspicion of undue influence must first determine if a confidential relationship exists (or existed) that would provide an opportunity for undue influence to occur. There must be reason to believe that role or power was used to exploit the trust, dependency, and fear of another. The means by which undue influence is imposed tends to be subtle and sinister. For example, the process may involve the manipulation of social conditions such as the intentional fostering of dependency, isolation, or a sense of powerlessness; manipulating

fears and vulnerabilities; or by keeping the victim unaware and uninformed with the intention of financial exploitation.⁶ Certain demographic variables and behavioral changes have been found to increase the likelihood of undue influence and should be considered when conducting a capacity assessment. Those most likely to become victims of undue influence tend to be White females, over 75 years of age, physically dependent, and isolated. Often, these individuals will have experienced a significant or unexplained emotional change, insidious memory loss, or another cognitive deficit.^{6,33}

Use of Limited Guardianship and Least Restrictive Options

A guardian ad litem ("GAL") is a temporary guardian who serves only for the duration of legal action. The court appoints these special representatives for the individual (child or adult) who is deemed incompetent or lacking the capacity to manage legal, financial, and medical actions. Court-appointed GALs must be specially certified and are often attorneys. The GAL has extensive power and responsibility when conducting assigned duties and is usually responsible for the adult in need of care. Potential guardians must meet the requirements of no felony records or bankruptcies, be over the age of 18, be a resident of the same state, and live in reasonable proximity.

When an individual is deemed unable to perform a specific function such as manage property or business matters effectively because of mental illness, mental deficiency, physical illness or disability, chronic use of drugs, or confinement, a conservator may be appointed. Conservators generally assume a precise role, such as managing the financial affairs of a minor or an incapacitated adult. The conservator may be appointed by the court to take care of real estate, manage bank accounts, and handle investments. Their duties can range from paying bills to buying and selling stocks and bonds to managing rental property. Similarly, limited guardianship transfers rights and powers for only those areas in which the court decides the individual lacks capacity. In other words, incapacity need not be all or nothing. The capacity evaluation is a critical tool the court may use to (a) define the extent to which guardianship is ordered and (b) shape and plan the degree to which an individual ultimately retains or loses individual rights.^{41,42}

Power of attorney (POA) is an authorization to act on someone else's behalf in a legal, health-related, or business matter. The person authorizing the other to act is the principal, granter, or donor (of the power), and the one authorized to act is the agent or attorney-in-fact (www.americanbar.org). Unless otherwise proved, it is assumed that the principal can appoint a POA. A POA may be specific to finances, health care, or both. POA grants broad authority to an agent. There are few if any requirements to be a POA. In the event of a principal's illness or disability, or when the principal cannot be present or is unable to sign necessary legal documents, the POA is enacted. A POA can be flexible, enacted immediately, only if or until the principal is incapacitated, or "durable" if POA continues. If the POA does not terminate based on its terms when prepared, it becomes permanent unless revoked or a court order changes it.⁴¹

Ethical Issues in Methods and Means

Capacity examiners are hired to collect assessment data and to provide an opinion, not to support a particular outcome. The examiner must adhere to the standards of their field, use the best methods, and reliably disclose opinions based on the data reviewed and accumulated.^{24,31} Capacity assessments are useful means for resolving the tension between granting autonomy and guaranteeing protection of the individual and society in a way that minimizes harm. Capacity assessments should express the truth based on facts and evidence.

The APA Code of Ethics sets the standards of ethical behavior for psychologists.⁴³ The intent and content of these ethical tenets are consistent with the expected standards set for most medical professionals. As such, psychologists strive to benefit those with whom they work, take care to do no harm, and establish relationships of trust. They remain aware of their professional and scientific responsibilities to society and to the specific communities in which they work. Psychologists seek to promote accuracy, honesty, and truthfulness in the science, teaching, and the practice of psychology. In these activities, psychologists do not steal, cheat, or engage in fraud, deception, or intentional misrepresentation of fact. They recognize that fairness and justice entitle all persons access to and benefit from the contributions of the profession and to equal quality in the processes, procedures, and services conducted.

Informed Consent

Those who provide health care are required by law to assure informed consent before actions are taken. This tenet is based on the principle that every human being of adult years and sound mind has the right to determine what shall be done with their own body.^{42,44} The decision can be made only after a person has come to know and understand what a health care provider proposes to do, what the risks are from the treatment, and what alternatives exist. True consent implies an informed opportunity to evaluate and choose knowledgeably among the options available and appreciate the associated risks of each.⁴¹

Impaired MDC is prevalent in acute TBI and is strongly related to injury severity. One month following injury, Triebel and colleagues⁴⁵ concluded that MDC was mostly intact in patients with mild TBI, but impaired in patients with complicated mild TBI and moderately severe TBI. This study used the Capacity to Consent to Treatment Instrument²⁷ to assess the ability to (a) simply express a treatment choice (*expressing choice*); (b) appreciate the personal consequences of a treatment choice (*appreciation*); (c) provide rational reasons for a treatment choice (*reasoning*); and (d) understand the treatment situation, available treatment choices, and respective risks/benefits of the treatment choices (*understanding*).

Computerized Assessment in Forensic Capacity Assessment

The use of computerized neuropsychological assessment devices (CNADs) has been receiving ever-increasing attention within the frameworks of clinical practice, research, and clinical trials.^{44,46,47} There is considerable need to improve access to neurocognitive testing for underserved patients who, by virtue of health issues, in addition to economic,

socioeconomic, geographical, logistical, or cultural reasons are not referred for, or cannot access, needed services.^{46,48} CNADs refer to computerized neuropsychological testing utilizing a computer, digital tablet, handheld device, or another digital interface instead of a human examiner to administer, score, or interpret tests of brain function and mental status, and to answer questions about the impact of neurological health and illness.

The use of CNADs in capacity assessments requires an added layer of quality control, interpretive acumen, selective use, and recognition that even when a traditional examiner-administered test is programmed for computer administration, it becomes a new and different test. There are significant differences between examiner-administered and computerized tests. One noticeable difference is in the patient interface. In examiner-centered approaches, the patient interacts with an individual who presents stimuli; records verbal, motor, or written responses; and makes a note of critical behavioral observations.^{44,49} For a CNAD, examinees interact with a computer or tablet testing station through one or more alternative input devices (e.g., keyboard, voice, mouse, or touch screen), in some cases without supervision or observation by a test administrator. Also, some CNADs utilize an “adaptive” assessment approach derived from item response theory,⁴⁷ wherein the program adjusts task difficulty or stimulus presentation as a function of task success or failure on the part of the examinee.^{47,49}

Neuropsychological assessment has historically involved face-to-face evaluation of cognitive, expressive, motor, and thinking skills. In early 2020, the coronavirus (COVID-19) pandemic made it necessary for treatment providers to consider alternative or expanded methods of assessment in the interest of health, and world and nationwide requirements for social distancing. The use of CNADs and telemedicine became popular and vital alternatives to face-to-face, in-office assessment by means of distanced methodology such as telephone interviews, Health Insurance Portability and Accountability Act compliant videoconferencing applications, and connections to online assessment by invitation from a qualified examiner. As with many of the more intimate, traditional, and in-person methods of medical and health examinations, it was necessary to refashion the prevailing method and means while reliably preserving validity. The post-COVID-19 expansion of teleneuropsychology (teleNP) and telemedicine, in general, was the outcome of a health-related and socially related push for virtual visits that could serve as a conscientious alternative for both treatment and evaluation.⁴⁶

The Inter Organizational Practice Committee made up of the practice chairs of the American Academy of Clinical Neuropsychology/American Board of Clinical Neuropsychology, the National Academy of Neuropsychology, Division 40 of the APA, the American Board of Professional Neuropsychology, and the American Psychological Association Services, Inc. has been tasked with promoting and preserving the practice climate for neuropsychology and coordinating advocacy efforts. These combined efforts resulted in practice-specific guidelines for teleNP in telemedicine.^{46,47,50} This expansion of teleNP would potentially increase public access to copyright-protected and proprietary tests, making it ever more critical that test user qualifications be maintained, and that the technology of online neuropsychological testing remain secure

and confidential. Moreover, access should be limited to examiners with expertise in assessment, knowledge of psychometric principles, and an awareness of how changes to methodology could impact reliability and validity.

Health-related benefits such as viral mitigation and an alternative method for social distancing can be added to the prevailing list of advantages of CNADs and teleNP, such as (a) the capacity to test a large number of individuals quickly; (b) ready availability of assessment services without advance notice; (c) the ability to more precisely measure performance on time-sensitive tasks, such as reaction time, motor speed, response control; (d) the possibility of reduced assessment times; (e) reduced costs relating to test administration and scoring; (f) ease of administering measures in different languages; (g) automated data exporting for research purposes; (h) increased accessibility to patients who could not leave home or who were in areas or settings in which professional neuropsychological services were scarce; and (i) the ability to integrate and automate interpretive algorithms such as decision rules for determining impairment and statistically reliable change.^{47,48}

Regardless of the format, the examiner remains responsible for the final interpretation and must ensure that tests are administered properly and that the results are interpreted carefully. The responsible interpretation and reporting of results of CNADs necessitates an understanding of test utility and accuracy and depends on a familiarity with many technical details regarding a test's psychometric properties and normative standards. Because CNADs are qualitatively and technically different from examiner-administered instruments, best practices are of utmost importance to promote the conditions for competent and appropriate use.

Informed consent is particularly necessary when remote testing is recommended as an alternative to traditional and preferred face-to-face testing. A description of the potential limitations of teleNP as a format for assessment is warranted for inclusion on the consent. For example, informed consent should include a statement that teleNP is considered an adaptation to standardized administration and will be taken into consideration when reporting and interpreting the results of a remote administration. Test development and marketing companies generally advise that before test administration, the qualified professional obtain a documented agreement from the examinee that the session will not be recorded, reproduced, or published, and that copies of the materials will not be made. This caveat would also extend to attorneys who are representing individuals referred for testing in personal injury, capacity, and criminal cases. Likewise, the qualified professional may not utilize recording capabilities to record live test administrations.^{47,50}

The competent use of appropriately developed computerized neuropsychological measures can serve an increasingly important role in the evaluation of a variety of patient populations. Neuropsychological testing, whether directly administered by the neuropsychologist or computer facilitated, is a complex enterprise. The evaluation process, whether clinical or forensic, involves complex constructs, interpretation sensitivity, consideration for the way different patient groups interact with the assessment device, and novel sources of variance that can impact the interpretation of the test results. The use of CNADs in forensic applications will continue to warrant added scrutiny and deliberate justification of its use over the

traditional and preferred means of examiner-controlled, face-to-face test administration. Expertise in the interpretation of computerized tests requires advanced knowledge of testing theory and the complex interaction of multiple factors known to influence performance on cognitive tests. Such expertise evolves from specialized education, training, and experience in clinical neuropsychology.⁴⁷ Qualified test users understand that CNAD results must be interpreted in the context of the relevant history, other test findings, and data available from other disciplines.

Although there are apparent differences between stand-alone computerized platforms of standard examiner-administered tests (e.g., Wisconsin Card Sorting Test, Integrated Visual and Auditory Test, Category Test) and full-fledged computerized testing systems, users are expected to be mindful of critical tenets regarding (a) test reliability, validity, accuracy, and utility; (b) technical specifications, including how to ensure that the examinee's program installation and environment closely duplicate the environment in which normative data was collected; (c) methods for protecting privacy and data integrity; (d) the minimal qualifications of those who can install, administer, or interpret the test; (e) further requirements regarding utilization of computerized or actuarial reporting services; (f) information on who can and cannot benefit from undergoing assessment; (g) what the test claims to be able to do for the patient and/or professional user; and (h) how submaximal effort affects test results and how to interpret results when the examinee intentionally or unintentionally underperforms owing to reasons other than neurocognitive compromise.^{4,47}

As the COVID-19 crisis unfolded, a portion of psychologists across the country were inclined to pause their assessment services. Others who were amid time-sensitive, high stakes examinations chose to prevail with caution. As a result of prevailing health and economic conditions and the need to accommodate health, economic, and professional needs, six guiding principles were rolled out by APA's Division 12, Society of Clinical Psychology. The principles were issued to help guide the evaluation process amid the pandemic, and where necessary, alter standardized testing administration methods or means. Basically, any alteration would need to be fully disclosed and done carefully, thoughtfully, and deliberately, with attention paid to how the alterations themselves might modify interpretation or reliance on the data.

1. **Give critical thought before proceeding with test and subtest substitutions.** Some tests cannot be replicated via telehealth. Other viable tests, however, may be used to tap similar constructs. The most robust and meaningful scales in multifaceted tests are typically the overall "full-scale" indices, rather than their subscales. This would indicate that slight data problems may not be as significant, meaningful, or disruptive because they are only partially contributing to the overall score.
2. **Widen CIs when drawing conclusions and making clinical decisions.** Formal assessment requires that psychologists use their clinical judgment to interpret test scores, including inherent margins of error, within the context of individual and contextual factors, including presenting problems, diversity considerations, and other

factors. Integrating test data derived from administration procedures that have not been standardized or studied broadens the margin of error. The examiner should be deliberate and explicit about the broader CIs and potential for errors in the administration process, interpretation, and the write-up of results.

3. **Maintain the same ethical standards of care as in traditional psychological and neuropsychological assessment services.** The ethical principles that underlie the APA Code of Ethics promote a foundation of doing good, avoiding harm, and being accurate and just. This includes ensuring that the process of informed consent is thorough, precise, and ongoing. Novel circumstances under which the assessment was conducted should be described, as well as considerations given to how the data were interpreted, and any alterations to standards of care.
4. **Do not jeopardize test security.** While some test materials and procedures will need to be modified to allow for physical distancing, the examiner should be sure to preserve test security. For example, sending stimulus materials (copies of psychomotor task stimuli or record forms) may be not only unwise but also considered a violation of copyright law, ethics, and the protection of proprietary methods and means.
5. **Do the best with what is available.** It is essential for the examiner to know the limits of teletesting and to consider whether this approach is appropriate given the referral question, evidence, client characteristics, preferences, and clinician expertise. Efforts should be made to keep the administration procedures as close as possible to the traditional, in-person process.
6. **Be rigorously mindful of data quality.** To date, there is limited research and evidence for equivalence of testing in a remote, online format compared to a traditional face-to-face format. Every single task administered by CNAD should be deliberated and decisions based on just how much the quality of the data is likely affected by the alternative administration format.

When constraints are placed upon the method and means of assessment due to state or federal regulations, or acute health and safety issues such as those required during the 2020 pandemic, health professionals are challenged to conform and potentially modify testing processes. Modifications to standard test administration to include social distancing, exposure management, personal protection equipment, and increased attention to environmental and material disinfection of materials became and remain necessary. Pointers or gloves may be used instead of the traditional touching of materials. Other suggested practices have included screening policies whereby a decision is made to disqualify individuals who report infection or symptoms of a contagious disease, and/or postponing the assessment. Checking with the Centers for Disease Control and Prevention and state and county officials for the prevailing standards on the use of personal protective equipment (masks, gloves) during patient contact is recommended. Testing room chairs or tables may be arranged to maximize distance from the examinee. Tests that rely on nonmanipulatives may be used instead of hands-on versions when possible.

CONCLUSION

Capacity assessments are necessary when objective and binding decisions warrant reliable data regarding specific cognitive, emotional, and behavioral skills. Capacity assessments are valuable in forensic actions such as personal injury litigation; disability determination; decisions regarding the ability to function autonomously versus the need for protection or guardianship; and qualifying an individual's capacity at the time of an alleged criminal activity. Concerns about cognitive, emotional, and behavioral change in an individual following ABI lead to questions about residual capacity for independent functioning. This is particularly true when behavioral, physical, cognitive, or emotional changes limit intellectual and adaptive functioning. The principal reasons for capacity assessment are to measure the extent to which an individual can function rationally and independently in specific areas such as self-care, financial decision-making, and testamentary decisions, as well as justify retention of certain rights and personal freedoms. Clinical assessment of driving capacity and driving fitness should include measurements of attention (working memory, visual scanning, attention to detail, and selective attention), processing speed, language, memory, executive functioning, awareness, metacognition, and emotional status.

Legal reasons for capacity assessment may be tied to questions regarding the need for guardianship or a conservator, assessment of undue influence, and an individual's capacity to make informed treatment decisions, that is, to appreciate risk versus benefit and understand the consequences of a choice. Capacity assessments inform legal decisions regarding competency. Competence is a threshold requirement determined by a judge and imposed by law for the benefit of society. Competence is necessary to retain decision-making power and participate in a specific activity or set of actions.

Capacity examiners are hired to collect assessment data and to provide an opinion, not to support a particular outcome. The examiner must adhere to the standards of their field and use the best methods, and then reliably disclose opinions based on the data accumulated and reviewed. Capacity assessments are expected to mediate if not resolve the tension between preserving autonomy and securing protection in a way that minimizes harm. Capacity assessments should express the truth based on facts and evidence. Capacity assessments are expected to include a review of all available records (medical, academic, vocational, legal), clinical interview of the individual whose capacity is in question, behavioral observations, formal testing using standardized measures, and collateral interviews. Unless disproven or challenged, mental capacity is presumed. If a person lacks decision-making capacity, the examiner needs to establish when or if it can be regained and the likely time frame.

Person-centered principles applied in psychology have tremendous merit when used to conceptualize and implement capacity assessments following a cognitive decline. Whole-person assessment considers not only the etiology and discernment of deficits but also the long-standing aspects of a person's story, personality, values, and pre-injury lifestyle. Assessment of premorbid functioning becomes the context for understanding and better predicting preferences when personality or cognitive changes make it difficult to discern.

Unlike the process that unfolds following the onset of a progressive neurodegenerative disease, some degree of recovery following ABI is possible. The recovery trajectory following TBI is characteristically uneven with rapid and spontaneous changes occurring early, usually within the first months to a year, and often leaving a residual pattern of relative strengths and weaknesses. Specific functions may remain intact and relatively unchanged from premorbid levels or be exacerbated, while others may show impairment that can range from mild to severe, and potentially permanent. For these reasons, the way we assess capacity following ABI must adhere to different interpretive tenets. Variables such as age at injury, type of injury, degree of damage, pattern of strengths and weaknesses, time since injury, and premorbid functioning impact the manner in which test results are interpreted, predictions regarding prognosis are made, and strategies are recommended to help mitigate deterrents to capacity. Social trends such as an increased life span, an aging society, blended families, intergenerational wealth accumulation, and accessibility to legal options for transferring wealth can create fertile ground for conflicts regarding wills, entitlement, preservation of rights, need for supervision, and the potential for undue influence.

Neuropsychological assessment has historically involved the face-to-face evaluation of cognitive, expressive, motor, behavioral, and thinking skills. In early 2020, the coronavirus pandemic made it necessary for providers to consider alternative and expanded methods of assessment in the interest of global health and social distancing. Since the COVID-19 pandemic in 2020, the competent use of appropriately developed computerized neuropsychological measures (through CNADs) has served an increasingly important role in the evaluation of a variety of patient populations. This augmentative and alternative method of assessment followed the proliferation of and demand for distanced medical assessments via telemedicine. The use of CNADs has a role in bringing valid and effective neuropsychological evaluation techniques to underserved populations and to those who have age- or health-related limitations.

The use of CNADs for capacity assessment is appropriate when no other better method is possible or prudent due to health or physical constraints, or when time or distance prohibits face-to-face test administration. It is imperative that such an application proceed with an understanding that the effective use of such techniques requires attention to a broad range of factors, and the need to determine whether the test will be useful, accurate, and appropriate in the intended setting. Any modifications to standardized procedures should be documented in the report along with notation of any adjustments to the level of confidence that the examiner maintains. Users and consumers of CNADs must be mindful that ethical and clinically useful practice requires that such tests meet the appropriate quality and efficacy criteria. Those employing CNADs are expected to have the education, training, and experience necessary to interpret their results in a manner that will best address the purpose of the assessment and the criteria of the stakeholders and entities involved. Regardless of the undeniable advantage of CNADs for health reasons, potential convenience, and as an alternative means to guarantee social distancing, it is imperative that such applications proceed with caution. Effective use of such techniques requires attention to a broad range of factors

such as the consumer's level of sophistication and familiarity with computer technology, the availability and solvency of electronic data transmission, issues of confidentiality, and the impact of unstandardized methods on reliability.

Regardless of means or methodology, capacity examiners are hired to collect assessment data and to provide an opinion, not to support a particular outcome. The examiner must adhere to the standards of their field, use the best methods available, and reliably disclose opinions based on the data reviewed and accumulated. Capacity assessments should be defensible and express the truth based on facts and evidence.

KEY CLINICAL POINTS

1. Capacity assessments are used in clinical, administrative, and legal arenas to inform decisions regarding residual ability and the degree to which the post-injury survivor is ready and able to function independently.
2. Capacity assessments are conducted in response to questions best answered by objective and standardized examination of the individual's ability to express a choice, make a decision, and reason as well as domain-specific functions such as care for self, make financial decisions, execute a will, stand trial, return to work, and drive.
3. Standardized methods, tests, and normative comparisons are used to determine if sufficient improvement has occurred and when specific accommodations and safeguards such as guardianship or supervision are needed.
4. Capacity assessments are vital in forensic matters related to personal injury litigation; disability determination; and eligibility for insurance policy benefits and settlement payouts; and when answering legal questions regarding mental status or guardianship or suspicion of undue influence.

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Only key references appear in the print edition. The full reference list appears in the digital product found on <http://connect.springerpub.com/content/book/978-0-8261-4305-1/part/part19/chapter/ch87>

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