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Review Article

Decisional and Dispositional Capacity Determinations: Neuropsychiatric Illness and an Integrated Clinical Paradigm

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Background: *Assessment of decisional capacity requires thorough clinical review of a patient's current psychiatric symptoms and cognitive processes. The assessment to determine the patient's capacity for self-management postdischarge is a different clinical concept from decisional capacity.* **Objectives:** *Standardized guidelines for capacity determinations (both for informed consent and for disposition) would be helpful to clinicians, patients, and their caregivers.* **Method:** *The authors reviewed the recent clinical literature on neuropsychiatric illnesses associated with impaired decisional capacity, as well as for the term "dispositional capacity."* **Results:** *Neurocognitive disorders and neurologic disorders are commonly associated with impaired decisional capacity; other psychiatric illnesses are less commonly associated. There were no articles identified that used the term "dispositional capacity" to describe a subtype of decisional capacity determination. No definition or guidelines for determination of dispositional capacity were found.* **Conclusions:** *Routine evaluation for neurocognitive disorders including standardized cognitive assessment should be included in decisional capacity determinations. There is a need for a new subtype of decisional capacity determination, for which we propose the term "dispositional capacity." This concept is introduced and defined. For dispositional capacity determinations, supplementation of the usual decisional capacity evaluation with in vivo demonstration of self-management skills is recommended. Decisional and dispositional capacity determination is conceptualized with a biopsychosociocultural approach and guidelines for standardized assessment are presented.*

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Key words: dispositional capacity, decisional capacity, neurocognitive disorder, cognitive assessment, self-management skills.

INTRODUCTION

Decisional capacity determination is an important consultation skill for the Psychosomatic Medicine (PM) psychiatrist. Decisionally-incapacitated patients need surrogate consent for nonemergent interventions. This leads to a suspension of the patient's right to self-determination, even if ethically justified. These patients may have no available surrogate, necessitating court involvement. This may take time, incur expenses, and lead to other challenges that impede care.[1–5]

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A seminal article on clinical assessment of decisional capacity was written in 1988 by Appelbaum and Grisso.[1] This article explicated the 4 "elements" of a decisional-capacity determination. According to this framework, pertinent to a specific medical/surgical procedure, the patient must be able to *understand* relevant information, *appreciate* the clinical circumstances, exhibit a *rational process of decision making* (i.e., being able to process options and compare them), and be able to *communicate a consistent choice* regarding intervention (vs noninvention). The context is always relevant and influences the degree of understanding, appreciation, rationality, and communication of a treatment choice needed. Facts and myths about decision making are summarized in Table 1.[6,7]

THE DECISIONAL CAPACITY GRADIENT AND COMMON DECISIONAL CAPACITY SCENARIOS

"Types" of medical decision needed may call on more or less sophisticated understanding, appreciation, and rationality than others; thus, decisional capacity is "dimensional," specific to the question at hand and not "categorical" (i.e., not "all-or-none"). The higher the risk of the decision, the higher the degree of decisional capacity that is required. The "Decisional Capacity gradient" is illustrated by the increasing degree of needed medical decisional capacity required to:

1. Appoint to a surrogate decision maker (which requires primary knowledge of the function of the surrogate decision maker and ability to name one) <
2. Accept a recommended procedure (consider risk/benefit ratio) <
3. Reject a recommended procedure (consider risk/benefit ratio) <
4. Accept research participation (which requires understanding of randomization, double-blinding, placebo control, and that one may not personally benefit from participation).[8–10]

DISPOSITIONAL CAPACITY: A PROPOSED CONSTRUCT THAT CONTRASTS WITH DECISIONAL CAPACITY

In contrast to decisional capacity, which pertains to a single decision and follows the doctrine of informed consent, determination of the capacity of a patient to participate in discharge planning following a hospital stay is a complex and multidimensional process. The process is complicated by patient, family, social network, clinician, and health care system factors that can be viewed on a continuum of biopsychosociocultural elements. We introduce the term "dispositional capacity" as a new subtype of decisional capacity because, unlike other determinations of decisional capacity, it also requires the consultant's *prediction* of how a patient *will behave* in the future and whether the patient will be able to adhere to recommended medical advice, procedures, appointments, regimens, and medications. It also requires the prediction of how or if a patient will survive independently in the community following the dependent nature of a stay on a hospital inpatient unit. The demographic, biological, and medical factors influencing dispositional capacity include age and stage of illness, understanding of illness, sensory capacities, mobility, and ability to perform activities of daily living and instrumental activities of daily living. Psychological factors include cognitive capacity and other psychiatric disorders, including addictive disorders. Social factors include housing status and status of the network of social support.

Decisional-capacity determinations can be difficult, but the determination of dispositional capacity is often far more complicated. Health care system factors influencing dispositional capacity include changes in the health care delivery environment, short length of hospital stay in every category of diagnosis or procedure, as well as the time pressures on a stressed system. Electronic medical record-keeping and other levels of technology further strain a stressed and taxed medical system of care.[11] Byyny[12] outlines the need for more time with patients in his article "Time matters—twenty minutes isn't enough". Baron emphasizes the need for communication in the care of patients.[13] An approach to the complexity of dispositional capacity determination can be found in a case conference about a discharge planning evaluation of a rootless individual[14] in contrast to a decisional-capacity assessment requested for a patient with end-stage renal disease who was refusing dialysis.[15] The dispositional-capacity request entailed determining whether a patient who communicated primarily in Polish would be safe to discharge back into the community from the hospital. A multidisciplinary approach led to

TABLE 1. Myths and Facts About Decisional Capacity[6,7]

Myths	Facts
All patients with certain psychiatric disorders lack decision-making capacity	Psychopathology per se does not preclude decision making
Current psychiatric illness precludes decision-making	A person with dementia, schizophrenia or depression can make decisions unless the psychopathology interferes with the process, as in the following examples:
History of psychiatric precludes decision-making	
Lack of decision-making capacity in one area precludes decision making in another area	a. Severe depression affecting cognitive function
Lack of decision-making capacity can be presumed when patients request to leave AMA	b. Severe dementia affecting understanding and/or judgment
There is no need to assess decision-making capacity unless patients request to leave AMA	c. Schizophrenia incorporating the illness/treatment into a delusional system
Decision-making capacity is an "all-or-none phenomenon"	Any physician can determine decisional capacity
Any cognitive impairment means lack of decision-making capacity	A psychiatrist required if the primary physician is unable to make the determination and/or if there is the need for assessment of psychiatric illness and its impact on decisional capacity
Lack of decision-making is necessarily a permanent condition	
Patients who have not been given relevant and consistent information about their treatment lack decision-making capacity	
Patients who have been involuntarily committed lack decision-making capacity	
Only psychiatrists and other mental health professionals can assess decision-making capacity	

exploration of the patient's psychosocial, psychiatric (including cognitive) factors through a Polish-speaking social worker, as well as an assessment of her network of social support in addition to evaluation, though collateral sources from the community, of how she handled activities of daily living and instrumental activities of daily living.

Dispositional capacity does not necessarily correlate with decisional capacity if there is no element of medical/surgical informed consent for a single clinical intervention present at the time of the dispositional capacity determination, although the dispositional capacity to refuse a safe discharge plan implicitly includes the need to demonstrate some knowledge of the needs for ongoing self-management of one's clinical condition.[1–5]

Patients who request against medical advice (AMA) discharges often generate requests for decisional capacity assessment. This request often follows breakdown in physician—patient communication, though prevailing social concerns (e.g., patient fears of being discovered as an undocumented immigrant, loss of income for someone with limited financial assets, or need to care for an ill/dependent family member, may precipitate AMA discharge requests). AMA requests are often both decisional capacity determinations (in that the patient refuses intervention) and dispositional capacity determination (in that the consultant is expected to assess the patient's ability to self-manage in an ongoing way after discharge).

SPECIFIC PSYCHIATRIC ILLNESSES AND THEIR EFFECT ON DECISIONAL CAPACITY AND DISPOSITIONAL CAPACITY

A primary element in decisional capacity and dispositional-capacity determinations is the degree of cognitive function. The properties of understanding, appreciation, rationality, and forming a choice require at least "minimally capable" levels of cognitive function. It is important to remember that if a patient can demonstrate full understanding of the nature of a procedure, its risks and benefits, and consequences of refusal, that even in the context of clear cognitive impairment and advanced age, the patient may *still* have the decisional capacity to refuse or consent for the treatment or procedure. Literature to date supports the view that when decisional-capacity impairment has been studied regarding specific psychiatric illnesses, dementia/delirium/both have been consistently implicated.[2–5] It is important to maintain an

TABLE 2. Decisional Capacity and Neuropsychiatric Illness Studies

Study	# of Patients	Disease Process or Clinical Setting	Primary outcome
Kahn et al.[16]	88	Inpatient PM Consults	52 with cognitive disorders, most common psychiatric illness in diminished DC, MMSE < 21 was 100% specific and 69% sensitive for finding impaired DC, MMSE < 24 was 83% sensitive and 90% specific for finding impaired DC.
Kolva et al.[3]	24	Terminally ill adults	20 with impaired *understanding*, 5 with impaired *appreciation*, 15 with impaired *reasoning*, 2 with impaired *communication of treatment choice*, 5 with MMSE < 24, decreased understanding correlated with lower MMSE, 12 with significant depression and 10 with significant anxiety on HADS, "…impact of depression and anxiety is … dwarfed by … cognitive impairment and severe mental illness"
Allen et al.[17]	78	Skilled nursing facility residents	82% could *communicate treatment choice,* but 27% had impaired *understanding* and 35% had impaired *appreciation,* MMSE score correlated with the performance on the *understanding* and *appreciation* elements.
Okonkwo et al.[18]	116	Minimal Cognitive Impairment (MCI)	MCI patients had decreased *appreciation, reasoning,* and *understanding* when compared to cognitively intact controls.
Gurrera et al.[19]	83, 76 controls	Geriatric with cognitive impairment	Performance on neuropsychology assessments correlated with DC performance.
Ghormley et al.[20]	31 (15 with neuropsychological deficits, 16 without), 16 controls	Depression	Depression with neuropsychological deficits had poor *understanding*, but with cueing these patients' performance improved to not different from controls
Burton et al.[21]	110	Hospice patients without chart evidence or history of cognitive impairment	59 had impairment on neuropsychological testing, which correlated with diminished DC, "verbal abilities predict decisional capacity."
Khin Khin et al.[22]	(review)	ALS	Cognitive disorder present in 35-50% ALS patients. Verbal fluency deficits correlate with decreased DC
Martin et al.[23]	16 Cognitive impairment without dementia, 16 Dementia, 22 Controls	Parkinson's disease	Cognitively impaired without dementia exhibited decreased *understanding*, while dementia patients had decreased *understanding, reasoning, appreciation.*
Basso et al.[24]	36 (12 with cognitive deficits), 16 controls	Multiple Sclerosis	Patients with cognitive deficits had decreased *understanding*, repetition of clinical information and cueing increased DC to be comparable to that of controls.
Boettger et al.[25]	172	Inpatient PM consults with impaired DC	92 cases cognitive disorders, 64 substance use disorders, 43 psychotic disorders, 29 mood disorders, 65 neurological disorders
Boettger et al.[26]	19	Age > 65 with impaired DC on inpatient PM consults	Dementia primary illness associated with diminished DC
Gerstnecker et al.[27]	41, 41 controls	CNS metastases	*Understanding* level correlated with attention, verbal fluency, verbal memory, processing speed, and executive function.
Martin et al.[28]	71	Both primary and metastatic CNS tumors	Even mildly decreased Karnofsky Performance Status (which may not indicate significant functional impairment in other domains) correlated with impaired DC.
Palmer and Jeste[29]	70	Schizophrenia	DC, especially *understanding* and *appreciation*, correlated with cognitive status; *understanding* correlated with negative symptoms, general psychopathology but not positive symptoms of depressive symptoms
Jeste et al.[30]	(review)	Schizophrenia	Diminished DC in schizophrenia of 10-52% across studies (diminished DC in 0-18% of controls)
Gurrera et al.[31]	79	Mild-moderate dementia	11 with diminished DC on Hopemont Capacity Assessment Interview, 13 with impaired DC on MacArthur Competence Assessment Tool for Treatment, 24 with impaired DC on Capacity to Consent to Treatment Instrument
Hamann et al.[32]	100	MCI or AD	90 with decreased *understanding,* 7 with decreased *appreciation*, 20 with decreased *rationality,* 6 with decreased *communication of choice* regarding a hypothetical treatment

TABLE 2. Continued

Study	# of Patients	Disease Process or Clinical Setting	Primary outcome
Mandaeilli et al.[33]	45 (schizophrenia 25, mood disorder 17, other 3)	Acute psychiatric admissions	27 with impaired executive function, which correlated with impaired DC by diminished *understanding, appreciation,* and *communication of choice*
Torke et al.[34]	597	Hospital patients > 65 facing one/more major medical decision	Most common reasons for impaired DC: Alzheimer's disease (39.4%), Delirium (19.0%)
Zaros et al.[35]	145	Adult patients with advanced cancer who died in hospital	27 had impaired DC at admission, 46 lost DC during admission, psychiatric illness not specified

ALS = amyotrophic lateral sclerosis; CNS = central nervous system; DC = decisional capacity; HADS = Hospital Anxiety and Depression Scale; MMSE = Mini–mental state examination; PM = Psychosomatic Medicine.

integrative and holistic view of the patient while accomplishing decisional-capacity determinations, however. Although somewhat more difficult to quantify, the patient's status in other areas of psychiatric functioning is important to consider. Although neurocognitive disorders are the psychiatric illnesses most commonly associated with impaired decisional capacity, there are times where adjustment, depressive, bipolar, psychotic, and other psychiatric disorders may themselves impair decisional capacity even in the context of normal cognitive function.[2–5,10] We summarize these findings in Table 2.[3,16–35]

Our review of the literature highlights several key themes. First, the PM provider performing decisional/dispositional capacity evaluations must consider neurocognitive function as well as other areas of psychiatric function. Particular attention should be paid to major/mild neurocognitive disorder/dementia, delirium, depression, and neurological disorders.[4] Consistent with the bulk of the literature on the differential effect of specific psychiatric illness on decisional capacity, Appelbaum has also identified that decisional capacity is more impaired in dementia > schizophrenia > depression, and minimal cognitive impairment is associated with decisional capacity deficits less than in dementia but more than in those with no cognitive impairment.[2]

CLINICAL APPROACHES TO DECISIONAL CAPACITY AND DISPOSITIONAL CAPACITY DETERMINATIONS

It is important to add formal cognitive assessment in decisional capacity and dispositional capacity determinations. At the bedside, where elaborated and exhaustive neuropsychology assessment batteries are impractical, standardized formal cognitive assessments (e.g., Mini-Mental State Examination (MMSE)/Montreal Cognitive Assessment (MoCA)) are increasingly a part of decisional-capacity assessments.[1,2] Given the persistent finding of cognitive impairment in decisional capacity impaired patients, it may be best to regard "every decisional capacity/dispositional capacity determination as a surreptitious neurocognitive disorders work-up." Structured clinical interviews to assess decisional capacity which were developed for research purposes may also be considered, though the time required to complete these structured interviews may be impractical for routine clinical use.[2–4]

Although not dispositive as a sole determinant regarding decisional capacity/dispositional capacity, the Folstein MMSE may serve as an important tool or guide, or both in decisional-capacity case, with MMSE scores <16–19 correlated with (but not determinative of) impaired decisional capacity and MMSE scores >24–27 correlated with (but again not determinative of) intact decisional capacity.[4] In the middle range of MMSE scores, the MMSE is likely to be least helpful, unstructured interviews are likely inadequate, and additional structured assessment is warranted in Appelbaum's assessment.[2]

Periodic assessment of decisional capacity in dementia patients twice per year may assist in determining changes in decisional capacity.[2] Additional decisional capacity assessment tools include the MacArthur Competence Assessment Tool for Treatment, the Competency to Consent to Treatment Instrument, the Hopemont Capacity Assessment Interview, and the Hopkins Competency Assessment Test.[4] One article recommended the use of structured

interviews, such as the MacArthur Competence Assessment Tool for Clinical Research and Competency to Consent to Treatment in all elderly patients.[5]

Where there is suspected or apparent decisional incapacity due to neurocognitive impairment in particular, clinicians should direct their focus to optimizing the diagnosis of underlying causes of lack of decisional capacity/dispositional capacity, treatment of reversible causes, and optimization of personal and environmental factors contributing to incapacity.[2,4] Given the prevalence of delirium as a cause of impaired decisional capacity, Rodin and Mohile[5] recommend the use of formal delirium screening tools, such as the Confusion Assessment Method, the Memorial Delirium Assessment Scale, or the Delirium Rating Scale.

The literature supports environmental modifications and modes of clinical assessment aimed at maximizing patient performance. Modification of the clinical interview can include simplification of clinical information, presentation of clinical information by means of a story book or videotape, using a video or screen display or other visual aids, presenting clinical information with incremental disclosure over time, repetition, and using touch screen devices for patients with verbal impairment.[2,4] Assessments should be in the patient's native language, occur in an environment that minimizes environmental distractions, and occur early in the morning when patients are at their maximum level of attention.[2] In patients with communication barriers, such as aphasia, speech and language pathology consultation may be of particular utility.[36] Repeating clinical information in different way may increase understanding, as may a fixed choice (rather than open ended/unstructured) response paradigm.[36] For the more "mechanical" aspects of communication in decisional capacity/dispositional capacity assessments the use of communication boards and gestures to supplement spoken and written communication may be additionally helpful.[36]

Dispositional-capacity determinations will often require some supplemental functional assessment instruments to address specific areas of strength and deficit. Examples include assessment of activities of daily living and instrumental activities of daily living (Kohlman Evaluation of Living Skills and Assessment of Capacity for Everyday Decision Making, Texas Functional Living Scale), financial management (Financial Capacity Instrument), driving (formal assessment by the local Department of Motor Vehicles), voting (Competence Assessment Tool for Voting) and executing a will (testamentary capacity) (Hopkins Competency Assessment), and sexual consent.[4]

It is critical to remember that decisional capacity and dispositional capacity determinations, though intimately tied to cognitive status in many cases, need to be considered as separate assessments from other elements of the psychiatric interview, in that decisional capacity or dispositional capacity cannot *a priori* be assumed to be intact or impaired solely based on other psychiatric comorbid illness or recent behaviors reflective of psychiatric illness, or both. Decisional capacity or dispositional capacity cannot be assumed to be impaired "solely" because of the presence (even when chronic and well established and documented) psychiatric or neurologic illness. Instead, a "cross product" of critical variables needs to be conceptualized. Putting this algebraically, functional status × cognitive status × specifics of the medical decision needed at hand all must be considered. For example, a recent suicide attempt (even if the suicide attempt directly led to the hospital admission) does not *a priori* mean reduced decisional capacity or dispositional capacity, nor does the presence of a psychiatric commitment order *per se.* In both of these situations, a decisional capacity or dispositional capacity determination specific to the proposed clinical intervention is needed (though the assessing physician will of course take all relevant clinical facts into consideration).

As both delirium and decisional capacity fluctuate over time and over the course of a day and even an hour, it is most important for the PM provider to discuss the situation with nursing staff to determine if there is a consistent pattern, visit the patient at different times of day, and try to determine decisional capacity when the patient is at the clearest possible point. As there are situations, such as sudden blood loss, medication or other intoxication, seizures, ictal, interictal, and postictal states that resolve, decisional capacity can be determined when the patient is not in delirium.

Another context for dispositional capacity determinations is when "the medical team doesn't feel comfortable discharging this patient" or "we don't want to discharge this patient until psychiatry approves the discharge." One critical step in the dispositional capacity assessment is identification of the

FIGURE. Proposed Integrated Approach to a Psychiatric Approach to Capacity Determinations.

1. Determine type of DC question (i.e., informed consent vs treatment refusal vs AMA vs capacity for social function/dispositional capacity)
2. For informed consent, a full description of the proposed intervention and its risks/benefits/side effects
3. Full standardized psychiatric interview and neurocognitive disorders workup (e.g. ,MoCA on every DC case). Consider Hamilton Depression Rating Scale and other rating scales
4. Psychiatric diagnosis (or "no psychiatric illness" if relevant) summary and proposed psychiatric workup (neuroimaging, laboratory) and interventions
5. For informed consent cases, if there is evidence of cognitive impairment, modify consent process to facilitate understanding
6. For informed consent, separate addressing of the 4 Appelbaum and Grisso factors pertinent to the proposed intervention
    a. Understanding
    b. Appreciation
    c. Rationality
    d. Choice
7. Consider DC specific instruments
8. Dispositional capacity/social function – in vivo assessment using OT/other assessment
9. Summary of case diagnosis, formulation, DC status specific to the DC question(s), whether treatment could change DC findings, "differential capacity" findings (e.g. if a patient could choose a SDM even if not able to consent/refuse surgery per se).

underlying concern or triggering event. Dispositional capacity assessments may be triggered by regulatory considerations requiring safe discharge plans or mandated protective considerations, or both. Dispositional capacity relates somewhat conceptually to informed consent based decisional-capacity determination (in that cognitive and other central nervous system status is important), but there are important, additional considerations.

SYNTHESIS: AN INTEGRATED APPROACH TO DECISIONAL CAPACITY AND DISPOSITIONAL CAPACITY CASES

Given the increasing interest in decisional capacity and dispositional capacity and the ethical and medicolegal implications for patient care, the accumulating literature implicating many psychiatric (and neurologic) illnesses in decisional capacity status, and the increasing appreciation of decisional-capacity determinations as an important area of PM practice, it is timely to more fully integrate a standard approach to cases presenting with concerns over decisional capacity and dispositional capacity. A clinical practice of PM "only answering the capacity question" is limited and problematic, and represents a lost opportunity to fully engage in comprehensive patient care. For example, PM provider called to assess "only if the patient is suicidal" would be negligent of his/her duties to only comment on suicidal risk and not to attempt to formulate and propose treatment for the depressive, bipolar, neurocognitive, psychotic or other type of psychiatric disorder leading to the concern for suicide. Therefore, decisional capacity/dispositional capacity

consultations should be seen in the same light. It is clear from the literature that patients with impaired decisional capacity/dispositional capacity have a high prevalence neurocognitive disorders; somewhat less commonly, bipolar disorder, depressive disorder, or psychotic disorder may manifest with impaired decisional capacity/dispositional capacity.

As a proposed integrated approach to a psychiatric approach to capacity determinations, a standardized approach could be routinely adopted and would offer the full benefit of the PM consultation to the referring clinical services and give a framework for psychiatric intervention in the context of a capacity question. This comprehensive and integrated approach to care also demonstrates the significant contribution of the PM provider to the overall care of the patient, not solely limited to the capacity question (Figure).[1–5]

CONCLUSIONS

Decisional incapacity correlates with neurocognitive disorders more than other psychiatric illnesses. Modification of the capacity assessment for cognitively impaired and end-of-life patients is often necessary. Dispositional capacity is proposed as a new term with a separate meaning, which includes routine use of occupational therapy and social work. Capacity determinations, when accomplished by PM providers, should not be done in isolation, but rather need to be part of a comprehensive consultation, addressing the capacity question in the broader context of the biopsychosocial model.

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