Assessment of Decision-Making Capacity in the Elderly Hospitalized Patient

Case Study and Commentary, Sahana Misra, MD, and Kristen M. Snyder, MD

Abstract

- **Objective:** To provide an overview of the concept of medical decision-making capacity and the standards for its assessment.
- **Methods:** Review of the literature in the context of a clinical case.
- **Results:** The ability to participate in decisions about one’s own medical care is fundamental to personal autonomy. However, transient or progressive cognitive impairment in the hospital setting can place elderly patients at risk for impaired decision-making abilities. Structured capacity assessments of cognitively impaired elderly can identify deficits in decisional abilities and opportunities for optimizing patient participation, either through direct participation or the use of a surrogate.
- **Conclusion:** Clinicians in the hospital setting should strive to incorporate structured capacity assessments in their routine clinical practice.

The physician reviews the medical record. The patient is relatively healthy except for degenerative joint disease and mild hypertension. She was, however, recently diagnosed by her primary care provider with mild cognitive impairment, a condition thought to be a precursor to Alzheimer’s disease. The physician wonders if the patient is competent and whether or not she can consent to the surgery.

- **Is there a difference between competence and decision-making capacity?**

The terms “competence” and “decision-making capacity” are often used interchangeably by clinicians and in the literature, yet they have different meanings. Competence is a legal term. Incompetence is determined in a court of law and, if established, results in court assignment of a substituted decision-maker to make medical and/or financial decisions for the impaired person. This determination, likewise, can only be reversed in a court of law. In contrast, decision-making capacity is a clinical determination made by clinicians about a patient’s abilities to participate in specific decisions pertinent to their health care. This clinical determination, while derived from the legal construct of competence, is grounded in bioethical principles of clinical practice, including preservation of patient autonomy, beneficence, nonmaleficence, truthfulness, and the doctrine of informed consent.

- **Does a diagnosis of mild cognitive impairment or dementia establish lack of decision-making capacity?**

Patients with dementia or mild cognitive impairment, when examined as a group, demonstrate impairment in decisional...
abilities compared with noncognitively impaired control
groups. Individually, however, many patients retain adequate
decision-making abilities [1,2]. Thus, while the diagnosis of
mild cognitive impairment or a dementia may raise clinical
suspicion about a patient’s decisional abilities, it does not estab-
lish a lack of decision-making capacity on its own. A focused
capacity assessment should be done if there are concerns about
a patient’s capacity to participate in medical decision-making.

• How does cognitive impairment affect decision-making
capacity?

Cognitive dysfunction, specifically impairments in atten-
tion, memory, and executive function, have been associated
with impaired decision-making capacity [3–7]. For some
hospitalized patients, cognitive dysfunction may result in
poor attention during an informed consent discussion, im-
paired recall of relevant information about a proposed treat-
ment and alternatives, and an inability to think abstractly in
order to weigh short-term and long-term risks and benefits of
the proposed treatment and alternatives. Medical deci-
sions, however, vary along a continuum of complexity. A
patient with mild or moderate cognitive impairment may
easily be able to make simple decisions, such as consent-
ing to placement of a peripheral intravenous catheter or
designating a surrogate decision-maker for the clinician to
contact about medical decisions should the patient become
further compromised during their illness course. The same
patient may struggle, however, to weigh the risks and ben-
efits of complicated treatments with differing effectiveness
and range of adverse effects, for example, a complex chem-
otherapy regimen versus radiation for cancer treatment.

Research across several populations, including medically
ill patients and cognitively impaired elderly, has demonstrated
that repeated presentations and additional explanation of rel-
vant information improves decision-making abilities [1,8,9].
Clinicians may need to present complicated and abstract
information to cognitively impaired patients in small parcels
over several meetings rather than 1 lengthy informed consent
discussion. A quiet environment, lack of medical jargon, and
written information for the patient to review on his/her own
may also help optimize a patient’s decisional abilities.

• How is a decision-making capacity assessment per-
formed?

The assessment of capacity is limited in scope, focusing on a
specific choice, such as a medical treatment, a surgical pro-
cedure, or a community placement recommendation. A pre-
requisite of a capacity assessment requires that the clinician
has provided the patient with all the relevant information
about the situation in a manner that is best received by the
patient through an informed consent discussion. One widely
accepted conceptual model for decision-making capacity
assesses 4 decisional abilities (or standards): understanding,
appreciation, choice, and reasoning [10]. This conceptual
model provides the clinician with a framework for evaluat-
ing decision-making capacity in a systematic manner: the pa-
tient must be able to understand the facts about the proposed
treatment, including risks and benefits, the consequences
of no treatment, prognosis with or without treatment, and
alternatives. The patient should also be able to appreciate the
consequences of their decisions in the context of their unique
personal situation, use recognizable logic to arrive at a final
decision, and express a voluntary and stable choice [10].

Decision-making capacity is conceptualized along a con-
tinuum. The stringency by which the 4 decisional abilities
must be demonstrated varies according to the risk-to-benefit
ratio of the specific clinical decision being considered. A
lower threshold for capacity will suffice for decisions with
minimal risks, while decisions that involve greater risk or
little benefit should trigger stricter requirements for capacity
to consent as a protective measure.

The assessment is a 2-stage process. First, a clinician
systematically evaluates each decisional ability through
focussed questioning (Table). Then, the clinician must make
a clinical judgment of an ultimately dichotomous nature—
whether the patient can or cannot participate in the decision-
making process—taking performance on decisional abilities
and the risk-to-benefit ratio of the decision in question into

Standardized instruments for capacity assessment have
been developed to help clinicians and researchers systemati-
cally evaluate decisional abilities for treatment decisions and
research participation. These tools vary widely in format,
validity, and reliability. Among tools assessing capacity for
treatment decisions, the MacArthur Competence Assessment
Tool for Treatment (Mac-CAT-T) has been found to be the most
well studied and validated tool [12]. The Mac-CAT-T was de-
developed from Appelbaum and Grisso’s landmark MacArthur
Treatment Competence Study that evaluated decision-making
capacity for treatment decisions in medically ill, psychia-
trically ill, and non-ill subjects [13]. The Mac-CAT-T is a structured
interview tool based on the 4 standards and requires about
20 minutes to administer [14]. Because of the situation-specific
nature of capacity assessments, the Mac-CAT-T guides the ad-
ministrator through information disclosure and tailoring of
assessment questions that are specific to the treatment situa-
tion (similar in format to the example questions shown in the
Table). The Mac-CAT-T does allow for each of the 4 standards
Case-based review to be scored but does not provide cut-off scores to establish whether a patient has capacity. This is in keeping with the principle that the threshold necessary for a patient having sufficient capacity will vary depending on the complexity and risk of the decision. In addition, Grisso and Appelbaum state that a summative score diminishes the stand-alone importance of each decisional ability [15]. For example, a patient who lives alone may demonstrate a lack of appreciation that his inability to walk poses an immediate danger should he return home, yet he is able to communicate his choice to go home and accurately paraphrase why his medical providers do not want him to go home (eg, “You are afraid I will fall and get hurt but I will be just fine”). The patient’s lack of appreciation of the immediate danger he is in might be sufficient for a clinician to determine that the patient does not have the capacity to participate in placement decisions. Despite the lack of established cut-off scores to determine adequate capacity, structured tools, such as the Mac-CAT-T, do provide a useful

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**Table. Example Assessment Questions of Decision-Making Capacity for Medical and Placement Decisions**

<table>
<thead>
<tr>
<th>Decisional Abilities or Standards*</th>
<th>Example Assessment Questions</th>
</tr>
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<tbody>
<tr>
<td>Communication of choice</td>
<td>Is the patient able to demonstrate a stable and consistent choice?</td>
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<tr>
<td></td>
<td>Do you wish to pursue the proposed treatment or do something different?</td>
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<tr>
<td></td>
<td>What do you want to do?</td>
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<td></td>
<td>Do you want to leave the hospital (or return home rather than going to the care facility)?</td>
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<tr>
<td>Understanding the facts</td>
<td>Does the patient demonstrate an understanding of the facts relevant to the recommended treatment?</td>
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<td></td>
<td>Can you describe the medical issue(s) that we (treating providers) are concerned with?</td>
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<td></td>
<td>Can you describe what we are recommending to you for treatment?</td>
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<td></td>
<td>What does the treatment involve?</td>
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<td></td>
<td>Can you describe what alternatives to the proposed treatment we have reviewed with you?</td>
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<tr>
<td></td>
<td>Why is it recommended that you stay in the hospital right now (or go to the care facility)?</td>
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<td></td>
<td>What concerns have we shared with you about leaving the hospital right now (or returning home rather than going to the care facility)?</td>
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<tr>
<td>Appreciating the situation and consequences</td>
<td>Is the patient able to demonstrate insight into how their choice will impact their short- and long-term situation?</td>
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<td></td>
<td>What are the reasons for your decision?</td>
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<td>What are the likely consequences of your choice not to pursue the recommended treatment?</td>
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<td></td>
<td>What are the risks of your choice? What will you do if these risks occur?</td>
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<td></td>
<td>What are the benefits of your choice not to pursue the recommended treatment?</td>
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<tr>
<td></td>
<td>How will your choice positively impact your life?</td>
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<tr>
<td></td>
<td>Why do you want to leave the hospital (or not go to the care facility)?</td>
</tr>
<tr>
<td></td>
<td>What are the consequences of you leaving the hospital right now?</td>
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<tr>
<td></td>
<td>What are the benefits of leaving the hospital (or returning home)?</td>
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<tr>
<td></td>
<td>Are there any risks to leaving the hospital (or returning home)?</td>
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<tr>
<td></td>
<td>How will you manage those risks?</td>
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<td></td>
<td>Clinician should measure the patient’s responses against functional exam:</td>
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<td></td>
<td>Is the patient’s sense of their functional abilities consistent with the objective functional evidence (physician, nursing, OT/PT assessment)?</td>
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<tr>
<td>Rational reasoning</td>
<td>During the discussion the clinician should be assessing the following:</td>
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<td>Can the patient’s chain of thought that allows him/her to arrive at a choice be followed easily?</td>
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<td></td>
<td>Does the patient’s reasoning flow logically and is it consistent with their choice, even if it is not what is being recommended?</td>
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<td>Is the patient comparing risks and benefits of the different choices in a logical manner?</td>
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<td></td>
<td>Are there impairments in memory, orientation, thought content (eg, delusions) or perceptual disturbances (eg, hallucinations) that are creating an illogical chain of thought?</td>
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*As described in reference 10.
framework for clinicians to conduct capacity assessments in a systematic and consistent manner.

Cognitive screening tools, such as the Mini-Mental State Examination (MMSE), are correlated to and can support the results of a capacity assessment by delineating areas of cognitive dysfunction. They cannot, however, be used on their own to determine decision-making capacity and do not replace a systematic evaluation of the 4 standards [16].

Case Follow-up

The physician engages the patient in a discussion about surgery to repair her hip. The physician communicates information about the injury and proposed surgery using jargon-free language and then begins a formal assessment for decision-making capacity.

Dr: So, I have explained that you have broken your hip and we are recommending a surgical repair of that hip. I mentioned the limited alternatives to surgery. I also explained what our proposed surgery will entail including possible risks and benefits. Do you have any questions so far?
Pt: No, I think I understand what you explained.
Dr: So that I can be certain you understand, can you tell me what our medical concern is and what we are recommending to you for treatment? (Assessing understanding of the facts and appreciation of situation.)
Pt: Well, when I fell, I broke the bone in my leg so that now it hurts when I try to walk and you are recommending that I have a surgery to fix the break. You mentioned you might need to put in screws and metal plates to fix the bone pieces together.
Dr: What have I told you are the alternatives to surgery? (Assessing understanding of the facts and appreciation of situation.)
Pt: You said that we could watch and wait or I could rest and see if the bone healed on its own, but this would mean I couldn’t walk around and I’d probably continue to have this terrible pain. I might also lose some of my ability to walk steady.
Dr: What do you want to do? (Assessing choice.)
Pt: Well, I think I should have the surgery.
Dr: Can you explain the reasons for your decision? (Assessing rational reasoning and appreciation of consequences of choice.)
Pt: Well, as I understand it, the surgery will allow me to get back on my feet sooner and will help me to heal so that I don’t continue to have pain or feel like I am going to fall when I walk.
Dr: Can you describe any risks associated with the surgery? (Assessing understanding of the facts and appreciation of consequences of choice.)
Pt: Well, you told me that I could have more bleeding than expected and need a transfusion. I could get an infection. You also said that my hip may not work as well as it did before even with the repair and that I could continue to have some difficulties with pain or walking. You said that I could even die during the surgery if there were a serious complication.
Dr: It sounds like you understand the risks, potential benefits, and alternatives to the surgery we recommend. Would you like to proceed?
Pt: Oh definitely! I want to get back to my bridge club and the church is going to be having an outing next month that I’ve been looking forward to. I know there are risks with any treatment, but I want to get this leg fixed up! How long will I be in the hospital after the surgery?
Dr: You will need some physical therapy and monitoring of your surgical wounds for drainage and signs of infection, but we should be able to get you home soon.

Physician’s Determination

The patient was able to demonstrate an understanding of the proposed treatment (with its associated risks, benefits, and alternatives) and an appreciation for her situation. She displays a logical framework for her responses and demonstrates an ability to weigh the consequences of her options. Her overall thought process is rational and logical. The physician determines that the patient is able to consent to the procedure.

- How does the informed consent process aid in determination of capacity?

Questions of capacity often arise during the informed consent discussion. A clinician conducting the informed consent discussion should observe the patient’s engagement in the conversation to inform their assessment of capacity. Was the patient attentive during the consent discussion? Did the patient ask questions? If so, did the questions reflect an understanding of the situation? Red flags indicating further need for evaluation include observation of a highly distractible patient, lack of patient questions, patient disorganization when asked to verbalize an understanding of the proposed treatment, or patient inclusion of irrelevant or inaccurate information when conveying a treatment choice.

Another red flag can be when a patient disagrees with a recommended plan. The rationale for a capacity assessment, however, should not be based on patient and clinician disagreement. The risk-to-benefit ratio of a proposed treatment is an important factor in patient decision making. If a patient refuses a recommendation that will likely result in a good
outcome and/or is associated with low risk, or hastily accepts a proposed treatment associated with significant risk, despite a thorough informed consent discussion, a capacity evaluation should be considered [17].

If the clinician still is uncertain about the patient’s decision-making ability or the patient does not seem engaged in the conversation, mental health evaluation may be useful. For some patients, a premorbid psychiatric illness may impede the informed consent process and confound the assessment. In these circumstances, the mental health professional can help facilitate the informed consent discussion and assessment of capacity.

**Surgery and Postoperative Course**

Ms. Smith tolerates her surgery well. Two days after the operation, the physician is called. The patient has been intermittently refusing wound care and has been pulling at her IV line and drains all afternoon. She is now insisting on going home.

- **How does delirium impact decision-making capacity?**

Delirium is a frequent cause of transient impairment in decision-making capacity in the inpatient medical or surgical setting [18]. The prevalence of delirium among elderly patients newly medically hospitalized varies from 14% to 24%. In addition, 6% to 56% develop delirium during their hospital stay [19,20]. Yet delirium in the elderly is often unrecognized or misdiagnosed [21,22].

Delirious patients may refuse care or try to leave the hospital because they cannot comprehend their circumstances or the consequences of their decisions. Their inattention and altered level of consciousness may impair the ability to understand clinical information, appreciate their situation, and communicate logical choices. Rational reasoning may be further impacted by disorganized thought processes that can accompany delirium such as psychotic symptoms. Therefore, changes in patient behavior such as refusal of care or wanting to leave the hospital should raise suspicion for delirium as well as diminished decision-making capacity and prompt immediate evaluation. An easy to administer, well-validated tool that can be used for assessment of delirium is the CAM, or Confusion Assessment Method [23]. An assessment for the hallmarks of delirium including acute onset, fluctuating course, inattention, disorganized thinking, and altered level of consciousness can assist the provider in identifying when and where decision-making capacity may be diminished [24]. Unlike dementia or mild cognitive impairment, impairment of decisional abilities due to delirium will fluctuate in severity and improve as a delirium resolves [20]. Clinicians should utilize surrogate decision makers for medical decisions in the interim while monitoring for improvement in cognition and decisional abilities. Patients should be re-engaged in their own treatment plans when their decisional abilities are regained.

**Case Conclusion**

The patient is found to have a urinary tract infection. The physicians determines that she does not have capacity to participate in disposition planning or leave against medical advice as she is no longer able to identify why she has been hospitalized or where she resides or how she will manage self-care. When asked about the risks associated with leaving the hospital, the patient states, “I’ll be fine! There is nothing wrong with me!” Physical and occupational therapy assessments sharply contrast Ms. Smith’s perception of her abilities and reveal significant functional difficulties including instability with gait and impulsive motor planning. The physician finds a 5-year-old advance directive in the medical record that designates Ms. Smith’s husband as health care power of attorney. The physician contacts the husband. The husband agrees that his wife would want to remain in the hospital and complete her treatment if she were not delirious.

With the help of family, medical staff reassure and redirect the patient when she talks about wanting to leave. The delirium clears after several days of antibiotic treatment. The surgical team feels discharge to a skilled nursing facility is advisable due to deconditioning that has occurred during the patient’s recovery from her urinary tract infection. The physician reassesses the patient’s decision-making capacity after discussing the proposed plan for placement at rehabilitation facility, including the potential benefits, risks, and alternatives to the plan. After reviewing the results of the assessment, the physician finds that the patient is able to understand and appreciate the reasons for the recommendation and is agreeable to further rehabilitation at a nursing skilled facility before returning home.

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**References**


