

# The Hopkins Competency Assessment Test: A Brief Method for Evaluating Patients' Capacity to Give Informed Consent

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*The Hopkins Competency Assessment Test (HCAT), a brief instrument for evaluating the competency of patients to give informed consent or write advance directives, consists of a short essay and a questionnaire for determining patients' understanding of the essay. In a study to validate the instrument, 41 medical and psychiatric inpatients answered the questionnaire after reading the essay while hearing it read aloud. A forensic psychiatrist who was blind to the HCAT scores later examined the patients for competency. A subject's number of correct answers to the HCAT questionnaire was an accurate indicator of clinical competency as assessed by the psychiatrist. The results suggest that the HCAT is a useful tool for rapidly screening patients for competency to make treatment decisions.*

Adult patients have the right to decide whether they will undergo a medical treatment. In the past 30

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years the doctrine of informed consent has established that patients should understand a description of the proposed treatment and should be aware of its risks, benefits, and alternatives. To be valid, informed consent must be voluntary, and patients must be competent to understand the discussion of the treatment and the right to informed consent.

Although judges ultimately decide whether a patient is competent, physicians are often asked for an opinion, based on their medical expertise, about a patient's competency. Quantitative scales that assist physicians in judging a patient's cognitive capacity and capacity for activities of daily living are available, but there are as yet no quantitative scales for assessing clinical competency, which is sometimes called clinical capacity. We report here the results of a study validating the Hopkins Competency Assessment Test, a new instrument for quantitative assessment of clinical competency. This test does not determine legal competency but rather is an aid to the clinician in forming an opinion about clinical competency.

## Methods

**Instrument.** The Hopkins Competency Assessment Test (HCAT) was developed to screen patients for competency to make treatment decisions and to write advance directives. The instrument consists of a short essay describing informed consent and durable power of attorney, followed by six questions about the material presented in the essay. Versions of the essay at the 13th-grade, eighth-grade, and sixth-grade reading levels were prepared. The grade levels were determined by the Flesch-Kincaid method using the Grammatik III Computer Program (1).

The questionnaire that follows the essay is written at the sixth-grade reading level. It includes true-false and sentence-completion questions, some of which have more than one part. Subjects score 1 point for each correct answer. Possible scores on the questionnaire range from 0 to 10.

The essays were designed for different reading levels because the literature indicates that comprehension of instruments depends directly on readability (2-7). We chose to offer the HCAT at high, middle, and low reading levels rather than only at a low reading level because our pilot data showed subjects with high educational attainment had difficulty comprehending the version written for persons with a low reading level. The HCAT essays are shown in Table 1, and the questionnaire is shown in Table 2. Essays were printed in large type (14 point) to minimize effects of visual impairment.

**Subjects.** Patients on a general medical ward and a general and geriatric psychiatry ward at the Johns Hopkins Hospital were asked to participate in the study. Informed consent was obtained from all participants, following the procedure approved by the Hopkins Institutional Review Board. We collected demographic and clinical information on all research subjects. Subjects also completed the Mini-Mental Status Examination (MMSE), a brief test of cognitive functioning. Possible scores on the MMSE range from 0 to 30, with scores less than 24 indicating impaired cognitive functioning.

**Procedure.** Data were collected in April 1990 on 12 days when both examiners were available. On the days data were collected, we attempted to enroll all new patients admitted to

Table 1

Essays at three reading comprehension levels presented to patients as part of the Hopkins Competency Assessment Test

Thirteenth grade	Eighth grade	Sixth grade
<p>Before undergoing a medical procedure, a patient must be informed about the procedure. The patient must understand what the procedure is about, the risks of the procedure, the benefits of the procedure, and alternatives to the procedure. After learning about the procedure the patient then has the option of agreeing to go forth with the procedure or not.</p> <p>Patients with chronic disease may lose the ability to understand the information necessary to make responsible decisions regarding their own health care. When that time comes they will not be able to consent to medical treatment and this power must then be delegated to someone else.</p> <p>Patients can leave formal legal instructions regarding what they would want to have done in specific medical situations and who they would want to make such decisions if they become unable to make them themselves. Such instructions are called a durable power of attorney.</p> <p>The durable power of attorney allows patients to designate who will make medical decisions for them and what limitations, if any, are placed on the decision making authority.</p>	<p>Before a patient has a medical procedure, he must be told about the procedure by the doctor. The patient must know what the procedure is and what could go wrong. The patient should also know what are the good things that could happen as a result of the procedure and what else could be done instead of the procedure. After the patient finds out about the procedure from his doctor the patient then can decide whether to have the procedure done or not.</p> <p>Patients who are sick for a long time may not be able to understand what the doctor tells them about what might need to be done. When this happens some patients are not able to give permission to their doctors to have certain tests or procedures done. Then someone else has to make their decisions for them.</p> <p>There are two things such patients can do. First, the patient can tell the doctor who he wants to make decisions for him if he is unable. Second, the patient can tell the doctor directly what he wants done if he becomes unable to make decisions himself. These instructions are called a durable power of attorney.</p> <p>The durable power of attorney lets patients decide who will make medical decisions for them if they are unable. It also lets the patient decide what the patient himself wants to have done if he is unable to make decisions.</p>	<p>Before a doctor can do something to a patient, he must tell the patient what he is going to do. The patient must know what the doctor is going to do, what could go wrong, what could go right, and what else the doctor could do instead. After the doctor tells the patient these things, the patient may agree to let the doctor go ahead. Or the patient can tell the doctor not to go ahead.</p> <p>Some patients have been sick for a long time. After a while their thinking might not be so good. At that time, the patient might not be able to think well enough to understand what his doctor says. When that time comes he will not be able to let the doctor know what he wants the doctor to do.</p> <p>Well patients can tell their doctor what they want the doctor to do. Well patients can also tell their doctor which person they would like for the doctor to talk with when the patient is not able to let the doctor know that he wants done himself. Such things need to be written down on paper. This paper is called a durable power of attorney.</p> <p>The durable power of attorney lets patients say who will tell the doctor what to do if the patient can't tell the doctor himself. The durable power of attorney also lets a patient say now what he wants to have done and what he doesn't want to have done if he gets sick.</p>

the wards being studied. A medical student (RJM), trained to administer the HCAT, gave the test.

The examiner asked each subject to read the 13th-grade version of the HCAT while the examiner read the material aloud. The HCAT was read to the subject to eliminate illiteracy as a confounding factor. The HCAT questionnaire was then read to the subject. If the subject scored 8 or higher, the examination ended and that score was recorded.

If the patient scored 7 or less, the examiner read aloud the eighth-grade version of the HCAT and administered the same questionnaire. If the subject scored 8 or higher, the

examination ended and that score was recorded. If the subject scored 7 or less, the examiner read aloud the sixth-grade version, administered the questionnaire, and recorded the patient's score.

Interobserver reliability of the HCAT was tested by comparing scores on questionnaires administered by two examiners (RJM and JSJ) to a pilot group of subjects.

Within 24 hours of the HCAT examination, a forensic psychiatrist (JSJ) experienced in clinical competency examinations performed a clinical competency examination on each subject. The forensic psychiatrist had completed psychiatric resi-

dency and a fellowship in forensic psychiatry and had three years of subsequent experience in the assessment of clinical competency. The purpose of the examination was to establish a standard by which to validate the HCAT questionnaire results. The forensic psychiatrist was blind to the results of the HCAT examination and to the patient's demographic and clinical data and MMSE score.

The forensic psychiatrist's examination consisted of a brief history and mental status examination as well as questions to determine the subject's competency to consent to medical treatment and to write a

**Table 2**

Questionnaire assessing respondent's understanding of essay presented in the Hopkins Competency Assessment Test<sup>1</sup>

Question	Answer
What are the four things a doctor must tell a patient before beginning a procedure?	What the doctor is going to do. What could go right. What could go wrong. What else the doctor could do instead. (1 point for each correct answer)
True or false: After learning about the procedure, the patient can decide not to have the procedure done.	True (1 point for correct answer)
What can sometimes happen to the thinking of a patient who has been sick for a long time?	After a while, the patient's thinking may not be as good as it is now. (1 point for correct answer)
Finish the sentence: A patient whose thinking gets bad may not be able to	Tell the doctor what the patient wants done. (1 point for correct answer)
What two things should such patients tell their doctor and family, before their thinking gets bad?	Patients can write down who else the doctor can talk to in order to make medical decisions for them.  Patients can write down what medical procedures they want to have done or not have done. (1 point for each correct answer)
What are these instructions to doctors and family called?	They are called durable powers of attorney. (1 point for correct answer)

<sup>1</sup> Possible scores range from 0 to 10.

durable power of attorney. The psychiatrist scored the examination by generating a categorical assessment of competent or not competent.

The validity of the HCAT was examined by comparing each subject's results on the forensic psychiatrist's examination and the HCAT questionnaire.

**Results**

Interobserver reliability, derived using Pearson's product-moment correlation coefficient, was .95 on 16 consecutive HCAT questionnaires (SE=.58, t=11.26, df=14, p<.001). The coefficient indicated a high degree of interobserver reliability.

Forty-one subjects agreed to participate in the study. Twenty-five (61 percent) were psychiatric patients, and 16 were medical ward patients. Twenty-nine patients (71 percent of all subjects) were hospitalized for treatment of deficits of the central nervous system. The remaining patients were being treated for deficits

in other primary organ systems, including the cardiovascular, respiratory, gastrointestinal, and endocrine systems.

The mean±SD age of subjects was 54±18.9 years, with a range from 20 to 83 years. Maximum years of education ranged from 0 to 22 years with a mean±SD of 9.7±4.2. The mean±SD number of different medications received by each patient in the 24-hour period before the HCAT was administered was 4.4±2, with a range from one to nine.

The average administration time was ten minutes for the HCAT and 45 minutes for the competency assessment conducted by the forensic psychiatrist. The forensic psychiatrist found 14 patients (34.1 percent) not competent to give informed consent.

Mean±SD HCAT scores for the medical and psychiatric patients were 5.75±3.23 and 5.04±3.38, respectively (t=.51, SE of the differ-

ence=1.07, df=39, ns). Mean±SD MMSE scores for those populations were 19.44±11.13 and 22.4±6.11 (t=.28, SE of the difference=2.60, df=39, ns). Thus similar ranges of scores were found in both groups, indicating that designation as a psychiatric or medical patient did not predict scores on either the HCAT or MMSE. Figure 1 shows a scatter plot representing each subject's HCAT and MMSE score and the result of the forensic psychiatrist's competency assessment.

We found that all 14 incompetent patients scored 3 or less on the HCAT. The remaining 27 patients, who were rated clinically competent, scored 4 or more. The results suggest that the HCAT has a sensitivity and specificity of 100 percent when a cutoff score of 4 is used to indicate competency.

To compare the accuracy of the MMSE and the HCAT, patients' MMSE scores were compared with the results of the psychiatrist's assessment. Using a MMSE score of 9 or below to indicate patients who are not competent resulted in a 100 percent sensitivity but only a 36 percent specificity. Conversely, when the cutoff point for competency was set at 24 or above, specificity of the MMSE increased to 100 percent but sensitivity dropped to 74 percent. As can be seen in Figure 1, there was considerable overlap between patients judged competent and incompetent when MMSE scores were used in the analysis.

Further analysis of the data found that competency as measured by the psychiatrist's assessment was not related significantly to either the number of medications the patient had received in the past 24 hours, the psychiatric versus medical status of the patient, the primary organ system affected, or the last grade the patient completed in school.

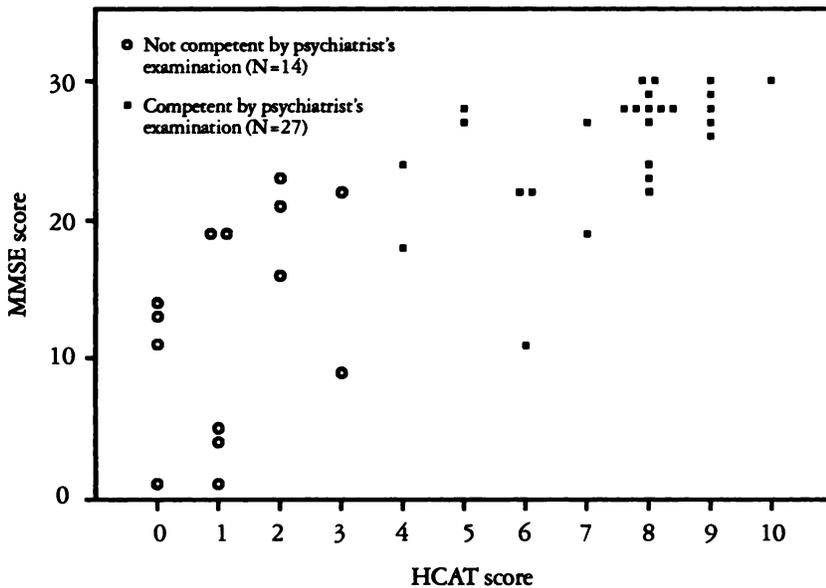
**Discussion and conclusions**

The Hopkins Competency Assessment Test is a reliable screening test for competency that can be administered by a nonclinician. The distribution of HCAT scores agreed with a forensic psychiatrist's opinion of patients' clinical competency.

The subjects in this sample were

**Figure 1**

Hopkins Competency Assessment Test (HCAT) scores and Mini-Mental Status Examination (MMSE) scores of 41 patients judged to be competent or incompetent by a forensic psychiatrist



patients on a medical and a psychiatric ward of a general hospital. More than 30 percent of the subjects were judged incompetent to make treatment decisions based on a standard clinical competency examination even though patients were not selected for the study on the basis of competency. In other settings, such as nursing homes, higher rates of incompetency can be expected.

The method of assessment was similar to that used in the assessment of comprehension of written documents. However, in this case the document was read aloud to the subjects, and thus the findings are applicable to illiterate patients.

The results of this study are limited by the sampling method and by the validation criteria used. The sample was not randomly selected from the general population, but instead was selected from patients hospitalized in an urban teaching hospital. The study should be replicated in other settings to determine the generalizability of the results in other patient groups.

The HCAT differs from measures of other conditions because its results have not yet been compared with those made by a wide range of com-

petency assessors. Perhaps criteria used by other psychiatrists would be associated with a different HCAT threshold for competency, and those used by judges still another threshold. Further validation of the HCAT in comparison with the judgment of other assessors of competency is needed.

Subjects' scores were distributed over the HCAT range of 0 to 10. The MMSE scores ranged from 0 to 30. The HCAT allows grading of clinical competency on a scale from 0 to 10, although in our study the forensic psychiatrist identified as incompetent only subjects who scored less than 4 on the HCAT. Cutoff points along a dimension are also used to indicate diagnostic categories in assessment of other clinical conditions, such as mental retardation or hypertension.

Another interesting aspect of the results was the failure of the MMSE to differentiate competent patients from incompetent patients with reasonable sensitivity or specificity. This finding suggests that specific tests of competency are needed in addition to standard psychological measures such as the MMSE.

Our results suggest that screening

every patient for clinical competency is possible and economically feasible. Other types of competency, such as testamentary capacity, could be tested with screening instruments similar to the HCAT.

Screening tests for competency are especially important in light of recent court decisions. In *Cruzan v. Director, Missouri Department of Health*, the United States Supreme Court declared that the Constitution provides a competent person "a constitutionally protected liberty interest in refusing unwanted medical treatment" (9). The Supreme Court further stated that "the United States Constitution would grant a competent person a constitutionally protected right to refuse life saving hydration and nutrition."

The Supreme Court noted, however, that by definition incompetent patients are unable to make informed and voluntary decisions regarding their own health care. The Supreme Court determined that a state could establish procedural safeguards to assure that the action of a surrogate decision maker "conforms as best it may to the wishes expressed by the patient while competent."

The *Cruzan* case highlights the importance of patients' making their wishes for medical treatment known by writing an advance directive before they become unable to make medical decisions. Patients must be competent for the advance directive to be valid. More generally, patients must be competent to give informed consent for any type of medical treatment. We propose that the Hopkins Competency Assessment Test is a useful tool for rapidly screening large numbers of patients for their competency to make treatment decisions and, more specifically, to write advance directives.

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# Confidentiality and the Family as Caregiver

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*Many families provide mentally ill relatives with a residence and other support. Although professionals increasingly acknowledge the importance of the supportive role families play, families continue to report that they receive too little information from professionals about the patient, particularly when the family acts as caregiver. The authors suggest that mental health professionals' views about confidentiality may prevent them from providing information to families and urge professionals to rethink the issue of confidentiality and its application to families acting as caregivers. The authors conclude that certain information about a patient can—and should—be shared with families who are in a caregiver role without violating clinical, legal, or ethical principles.*

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Many persons with mental disability reside with or are discharged from hospitals to their families. One survey of members of New York's Alliance for the Mentally Ill found that 40 percent of the families surveyed had mentally ill relatives living with them (1). Minkoff estimated that nearly 65 percent of psychiatric patients were discharged from a hospital to their families (2).

New and growing recognition of the importance of developing community supports has been accompanied by increased interest among professionals in providing support to families, principally because the family often functions as the "primary lifelong support system" (3). In a recent survey, mental health practitioners strongly agreed that families should be incorporated into treatment and given a supportive role (4). Ninety-eight percent of the respondents believed it was very important or moderately important for families to become educated about mental illness; 92 percent of the respondents thought it similarly important for families to oversee medication regimens of patients living at home.

At the same time, recent surveys of families of people labeled mentally ill suggest that many families believe they receive too little information

about their mentally ill relative and about the role the family might play in patient care—for example, in monitoring medication and its effects (5-8). Participants in one survey reported being very concerned that mental health professionals did not give them information about diagnoses, current treatments, availability of community resources, and effective strategies for managing the patient's illness at home (5). Families particularly needed information about medications and side effects, they believed. They stated that it was often difficult to know whether changes in the patient's condition resulted from reactions to medication or were additional symptoms of illness.

Although attempts to ascertain the perceptions of families and consumers about professional services and attitudes are relatively new, data from families show that the amount of information provided by professionals is insufficient. In our opinion, families in the role of caregiver often receive insufficient information because practitioners believe that legal and ethical principles governing confidentiality prevent them from sharing information with families.

In this paper, we suggest that because of the critical role families often play in sustaining mentally ill