Data from 50 residents of a long-term care facility were used to examine the extent to which performance on a brief, objective inventory could predict a clinical psychologist's evaluation of competence to participate in decisions about medical care. Results indicate that the competence to participate in medical decisions of two-thirds of the residents could be accurately assessed using scores on a mental status instrument and two vignette-based measures of medical decision-making. These procedures could enable nursing home staff to objectively assess the competence of residents to participate in important decisions about their medical care.
Key Words: Competence, Decision-making, Nursing home residents

Competence of Long-Term Care Residents to Participate in Decisions About Their Medical Care: A Brief, Objective Assessment[1]

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Issues of competence to make decisions about medical care are of great concern to service providers, to older adults living in long-term care facilities, and to the families of people living in long-term care facilities. These issues might range from the relatively mundane (Can Mrs. Jones decide what time she wants to get up in the morning?) to the extraordinary (Can Mr. Smith make end-of-life decisions?). Across the range of concerns, however, two facts are clear: First, issues of competence in the elderly will become increasingly important because of demographic trends and changes in medical and legal practices and policies. Second, there are currently no generally accepted reliable, valid assessment procedures to help service providers and families gauge an older adult's competence for involvement in important self-care issues, such as medical care. This article describes an approach to assessing the competence of older adults living in long-term care settings for making decisions regarding their medical care.

Demographic, legal, and policy developments have combined to make issues regarding determination of competence especially important for health decisions in long-term care (Dresser, 1994; Sabatino, in press). Demographically, the nursing home population is expected to triple over the next forty years, with the largest growth coming in the oldest, most impaired age group (U.S. Senate, 1987). Although Kastenbaum and Candy (1973) estimated that, at any one point in time, roughly five percent of older adults are in nursing homes, the lifetime risk of institutionalization is much higher than this cross-sectional view suggests (Liang & Tu, 1986; Palmore, 1976). Murtaugh and his colleagues, using data from the 1982–84 National Long Term Care Survey, report that almost a third of men turning 65 in 1990 and just over half of women can be expected to reside in a nursing home sometime before they die (Murtaugh, Kemper, & Spillman, 1990).

In the legal domain, guardianship proceedings have been marked by a gradual shift away from equating advanced age with incompetence (Altman, Parmelee, & Smyer, 1992; Kapp, 1991). Instead of relying solely upon chronological age as a criterion for incompetence, courts have focused attention on functional capacity in establishing guardianships to manage money, manage property, and make health-care decisions (Anderer, 1990; Smyer, 1993).

In the policy arena, two recent federal laws have mandated a greater role for older adults in determining their health care, particularly in long-term care settings. The Omnibus Budget Reconciliation Act of 1987 (OBRA 87) includes several provisions intended to improve the quality of care in nursing homes. The Nursing Home Reform Act mandated the right of nursing home residents to be involved in medical

decision-making about their care, unless they are deemed incompetent under the laws of their state. Under the Omnibus Budget Reconciliation Act of 1990 (OBRA 90), the Patient Self-Determination Act requires every health care facility receiving Medicare or Medicaid funds to prepare a written document that outlines the state's laws regarding advanced directives, informing its patients about their rights to specify living wills, durable powers of attorney, etc. The irony is, however, that neither of these statutes makes mention of the need to assess competence or the criteria by which it should be judged.

For nursing homes, the salience of competency issues becomes clear when lifetime risks of institutionalization are linked with the incidence of dementia and depression among home residents. Drawing on data from the Institutional Population Component of the 1987 National Medical Expenditure Survey (NMES), for example, Lair and Lefkowitz (1990) summarized the prevalence of mental disorders, problem behaviors, and self-care deficits among nursing home residents. According to these investigators, 28.7% of nursing home residents had dementia only, 13.7% had dementia in combination with one or more other mental disorders, and 15.5% had a mental disorder but no dementia. Additionally, Lair and Lefkowitz (1990) report that 64% of residents exhibited depressive symptoms, and 30% exhibited psychotic symptoms. A minority of nursing home residents (40.9%) were without a mental disorder.

Smyer and his colleagues (Goodwin, Smyer, & Lair, in press) recently used the NMES data to simulate rates of incompetence among nursing home residents. To do so, they relied upon Anderer's (1990) review of the statutes regarding guardianship and competency. Anderer (1990) pointed out that the best state statutes included three elements in arriving at a determination of incompetence: the presence of a disability or disorder; difficulty in decision-making or communicating decisions; and functional disability. Using these guidelines, Goodwin et al. (in press) used the Oklahoma statute in the NMES data to estimate the percentage of nursing home residents who might be deemed incompetent under its rules. They found that 53% of the NMES nursing home residents met this definition of legal incompetence.

Not surprisingly, these findings raise major concerns regarding some nursing home residents' ability to be actively involved in decision-making regarding their medical care. Questions also arise about who should determine whether or not a nursing home resident is competent to participate in decision-making activities. When Fitten and colleagues (Fitten, Lusky, & Hamann, 1990) presented three hypothetical treatment vignettes to residents in a VA nursing home, the gap between the residents' performance and their physicians' assessment of their capacity for consenting to treatment was astounding. Although 77% of nursing home residents were judged by their physicians to be capable of consenting to dental treatment, only one third (33.3%) achieved a perfect score on an objective consent capacity measure. Similarly, Wetle and her col-

leagues (Wetle, Levkoff, Cwikel, & Rosen, 1988) highlighted the gap between perceptions of residents and perceptions of nursing staff members.

The discrepancies in perception between nursing home residents and staff form a context for the recent legislative and regulatory interest in residents' rights to self-determination regarding their medical treatment and financial affairs. Currently, there is no consensus on the best assessment practices for gauging older adults' decision-making capacity. Given the high rates of dementia in nursing home residents, and the subjectivity with which competence is frequently evaluated, the need to participate in a medical decision justifies an objective assessment of those involved in such decisions. From a policy perspective, what is needed to enable nursing homes to fulfill the requirements of OBRA 87 and OBRA 90 is a simple, reliable, and valid method of assessing the competence of older adults to be involved in medical decision-making.

The Concept of Competence

For more than thirty years, psychologists have focused on the concept of competence as a guide for research, assessment, and practice. Not surprisingly, the term competence has come to assume different emphases, depending upon the historical and theoretical context used by the author (Ford, 1987). White (1959), for example, placed competence clearly within a motivational framework. In addition to delineating the distinction between competence as a motivational element and competence as a drive, White also focused attention on the organism's capacity to interact effectively with its environment.

This emphasis on the fit between the organism and the context continued as a theme throughout the next 30 years, and represents a second use of the term within Ford's (1987) scheme. Salthouse (1990), for example, focused on cognitive competence and the distinction between competence and ability, suggesting that while cognitive ability refers to an individual's intellectual level as measured by conventional tests of intelligence and cognitive functioning, cognitive competence is interpreted as the utilization of one's abilities — cognitive, interpersonal, and others — in adapting to particular situations.

While acknowledging the importance of context, Sternberg and Kolligian (1990) emphasize the evaluative component of competence — evaluation by both self and others. Representing a third aspect of competence within Ford's framework (Ford, 1987), Sternberg and Kolligian (1990) suggest that competence and incompetence involve, at a minimum, an interaction among person, task, and situation. More importantly, competence and incompetence are ascriptions to performance, and as such, represent a labeling phenomenon. Thus, it is not the same thing to understand *performance* (emphasis in original) in, say, mathematics as to understand *competence* in mathematics. Performance pertains to how well a person does, whereas competence refers to how well that person is perceived to do by someone, whether the self or another.

So far, these exemplary definitions have been drawn from psychologists focusing primarily on cognitive development and clinical practice. Others who have worked on reformulating legal approaches to issues of competence also emphasize the behavioral and labeling aspects highlighted in Sternberg's discussion. Those involved in assessing the competence of an individual must make judgments about the individual's capacity to function within certain environmental and social constraints. Usually, these judgments focus on specific behavioral competencies (Grisso, 1986).

A focus on behavioral functioning is a fourth use of the term competence within Ford's (1987) framework. Willis' recent work (Willis, 1991; Willis & Schaie, 1993) exemplifies an emphasis on behavioral functioning and focuses on everyday competence. Everyday competence represents an individual's ability or potential to perform adequately those activities considered essential for living on their own. It represents the potential or capability of an individual to perform certain tasks, not the actual daily behaviors of the individual. Willis has applied her model of everyday competency to seven major domains of daily functioning, including medications, finances, shopping, meal preparation, transportation, phone, and housekeeping.

Several elements of Willis' work are noteworthy. First, the model embodies an interactive view, emphasizing both individual and contextual elements. Second, it acknowledges the variability in competence over time, and across domains (American Bar Association, 1991). Third, it avoids a dichotomy of competent/noncompetent, while emphasizing the individual's level of competency within a particular domain (Coleman & Dooley, 1990). Moreover, Willis' work links the discussion of competence to the larger theoretical consideration of the relationship between underlying abilities and their manifestation in specific behaviors.

Within the realm of medical decisions, Appelbaum and Grisso (1988) suggest that four categories of competence are important in assessing patients' capacity to consent to treatment: communicating choices (the individual has the ability to maintain and communicate stable choices long enough for them to be implemented); understanding relevant information (the individual has a memory for words, phrases, ideas, and sequences of information); appreciating the situation and its consequences (the individual demonstrates the ability to appreciate situations, including acknowledging illness when it is shown to be present, evaluating its effect and the effect of the treatment options presented, and acknowledging that the general probabilities of risks and benefits apply to the situation); and manipulating information rationally (the individual has the ability to use logical processes to compare the benefits and risks of various treatment options and to reach conclusions that are logically consistent with the starting premises. Gerety, Chiodo, Kanten, Tuley, and Cornell (1993) suggest that decisional capacity requires that a person demonstrate the ability to:

comprehend the medical situation, weigh risks and benefits of all treatment options, manipulate information rationally, and clearly communicate a decision. Similarly, Pellegrino and Thomasma (1988) define competence as a resident's capacity to comprehend, retain, and recall information; to perceive the relationship of information received to one's current situation; to weigh the benefits and risks of options against a set of personal values; to make a choice, give cogent reasons, and persevere in that choice; and to communicate that choice to others in an unequivocal manner.

Needed: An Objective, Reliable Assessment Tool

Although there is a clear consensus that it is essential to assess decision-making capacity among long-term care residents, there is also agreement as to the lack of generally accepted, reliable, valid, and simple assessment techniques. Hofland and David (1990), for example, recently reviewed issues of autonomy and long-term care practices. Their conclusion summarizes the state of the field: "Practice procedures to assess decisional capacity are seriously flawed" (p. 92). Fitten and colleagues (Fitten et al., 1990) reached a similar conclusion. Focusing on the impaired elderly's ability to make decisions regarding specific medical procedures, they suggested: "In the absence of full psychiatric, neurologic, and legal evaluations . . . it may be insufficient to explain to the resident the nature of the medical problem, to outline treatment options, to offer a recommendation, and to accept his or her decision. . . . Under such conditions, clinicians can and should more systematically and directly probe the patient's understanding of the issues involved and the reasoning underlying his or her treatment decision. . ." (p. 1103). Weiler (1991) also concluded that reliable standardized assessment approaches are essential for those involved in providing long-term care, or those working with patients who have diminished capacities.

In summary, federal regulations requiring that nursing home residents be involved in decisions about their medical care, combined with research documenting the number of mentally impaired people living in long-term care facilities, highlight the need for simple, reliable, and valid assessment procedures to help identify those long-term care recipients who are competent to participate in the decision-making process. The current practice in most long-term care facilities is for social workers or nursing staff to make assessments of competence that are largely subjective. However, because the implications of these assessments are so complex, it is vital that a dimension of objectivity be added to the labeling process. As indicated earlier, these issues are especially salient in light of the demographics of long-term care, as well as recent legal and public policy developments. Thus, practice, policy, and research trends reflect the need for simple, reliable, and valid assessment procedures for determining the competence of older adults in long-term care settings to participate in decisions about their medical care.

Methods

Sample

Three units (including approximately 150 beds) in one nonprofit sectarian (Jewish) long-term care facility in northeast Ohio provided the population from which to draw respondents. The units were selected based on consultation with long-term care administrators and social work staff who indicated that residents on these units had Mini-Mental State Examination (MMSE; Folstein, Folstein, & McHugh, 1975) scores of 15 or greater. This cutoff was selected because pilot work indicated that residents with scores below 15 were unable to participate in the testing sessions. Although a random selection of respondents was planned, in reality, virtually all of those people living on the identified units were eventually approached and invited to participate in the study, unless they were aphasic, extremely hearing-impaired, or non-English-speaking. Of the 127 residents who were approached for the study, 50 (39.4%) agreed to participate, were qualified to participate (had an MMSE score of 15 or greater), and completed the study protocol; 46 (36.2%) refused outright. Using a series of t-tests, and information available from the Minimum Data Set Plus (MDS+), characteristics of residents refusing to participate in the study were contrasted with those who did participate. Analyses revealed that there were no significant differences between the two groups in terms of demographics, morbidity, or cognitive, physical and behavioral characteristics. The remainder of the potential respondents initially agreed to participate, but were excluded from the study; 17 (13.4%) did not achieve the minimum cutoff MMSE score, and 14 (11.0%) did not complete the entire study protocol, likely because of fatigue.

The sample was predominantly female (74%), and ranged in age from 72 to 98 ($M = 85.6$ years). Years of formal education ranged from 3 to 21 ($M = 11.3$ years). Length of residence in the facility ranged from 1 month to more than 8 years ($M = 2.2$ years), while the mean length of stay for residents on these units was 2.6 years. Chart reviews indicated that the number of diagnoses for respondents ranged from 3 to 14 ($M = 8.1$). Respondents were taking a mean of 10 prescribed medications (range 1–18) on a regular basis during the month preceding the first interview. Slightly more than half (52%) of the sample had a durable power of attorney for health care, and a living will was found in the medical records of 56% of the sample.

Procedures

Potential respondents were approached individually. The study was explained as a way of understanding how residents make decisions about medical care, in order to enable as many residents as possible to be involved in health care decisions. Verbal consent was then elicited before continuing. All respondents were interviewed both by a research assistant and an advanced level graduate student in clinical psychology. Thirty were interviewed first by the re-search assistant, and the remaining 20 were first interviewed by the clinical intern. The number of days that elapsed between the initial and final interviews ranged from 1 to 22 ($M = 6.2$ days). Half of the respondents completed both research and clinical assessments in two meetings; the rest required 3–5 sessions to complete both assessments. Nursing home staff were asked to indicate any significant health events occurring between assessments; none were reported. The duration of the research assessments ranged from 30 minutes to one hour and 45 minutes ($M = 56.2$ minutes). The clinical assessments ranged from 55 minutes to two hours and 15 minutes ($M = 1.6$ hours).

After rapport was established with the resident and consent given, the research assistant and clinical intern each began their session with respondents by administering the MMSE in a relaxed, nonthreatening manner. A score of 15 or greater was required for continuing with the rest of the interview.

Measures

Independent Variables. — Scores on the MMSE ranged from 15–30 ($M = 22.38$). Coefficient alpha for the scale was .68.

Two methods were used to assess respondents' understanding of disclosed medical information. Edelstein's (1993) Hopemont Capacity Assessment Inventory first examines an individual's understanding of the concepts of benefit, risk, and choice. Next, two hypothetical scenarios, one in which a friend with an eye infection has come to the respondent for help, and one about CPR, are read, and the respondent is asked a series of questions following each story (Who has the medical problem in the story? What is the medical problem in the story? What does the doctor in the story want your friend to do? Why does the doctor in the story want your friend to do that? What is the benefit of taking medication for the eye infection/having CPR? What is the risk of taking medication for the eye infection/having CPR performed? What is the risk of not taking medication for the eye infection/not having CPR performed? What are your friend's choices in the story? What would you advise your friend to do about the eye infection/CPR situation?). The procedures described by Edelstein (1993) for probing were then applied to the answers. Scale scores were created based on the correct answers to 20 factual questions (correct answers provided in the hypothetical scenarios) and 3 questions requiring the respondent to provide sensible follow-up reasoning to original questions. Scores on the Hopemont ranged from 0 to 23 ($M = 17.22$). Coefficient alpha for the scale was .75.

The second measure, Grisso and Appelbaum's (1991) Understanding of Treatment Disclosure (UTD), was designed to measure an individual's understanding of information for which disclosure to the patient is required in order to obtain informed consent for treatments involving medication. The UTD uses a five-paragraph description (26 printed text lines) called the "disclosure," which describes:

(a) a disorder, (b) a proffered medication, (c) benefits of the medication, (d) side effects of the medication, and (e) an alternative treatment and comments about the alternative's benefits and liabilities. The procedure consists of three tasks: (1) Uninterrupted Disclosure, where the examiner reads the entire disclosure while the respondent views a printed copy; then a series of standardized questions, one for each paragraph, is asked in order to elicit the respondent's paraphrase of the information presented in the disclosure. (2) Single-Unit Disclosure, in which the examiner presents the same paragraphs as before as "units" of information, with the appropriate questions (the same as those asked in Uninterrupted Disclosure) following immediately after each paragraph; this task is less demanding than Uninterrupted Disclosure, since paraphrased information should be more accessible to recall than information imbedded in the complete disclosure; there is also a shorter interval between presentation and recall, and less opportunity for other information or activities to interfere. (3) Single-Unit Recognition, which occurs in the context of the Single-Unit Disclosure process; after the respondent's paraphrased answer, the examiner presents four statements, two that are similar in meaning to the disclosed unit of information, and two that are dissimilar to the information; the respondent's task is to indicate whether each statement is "the same" as or "different" from the information disclosed. As in the first two procedures, this task requires retention and retrieval of the disclosed information, but it does not require that the respondent decode the information into verbal production as in the other two procedures. Only the two latter tasks (referred to as disclosure and recognition) were included in this study. Two of the four standardized disclosure scenarios developed by Grisso and Appelbaum (1991), that involving ischemic heart disease and that involving depression, were used in the study.

Responses to the disclosure and recognition tasks were scored according to the procedures described by Grisso and Appelbaum (1991). Scores for each procedure range from 0 to 10. Scores on the depression and heart scenarios under the disclosure condition were combined to form scales that were internally consistent, as were scores on the depression and heart scenarios under the recognition condition, with possible scores of 0 to 20. Mean score under the disclosure condition was 8.74 (range 1–15; SD = 3.58), and coefficient alpha was .71. Mean score under the recognition condition was 9.12 (range 1–18; SD = 3.88) and its coefficient alpha was .72.

Clinician Assessment of Competence for Medical Decision-Making. — The clinician's assessment of competence represented the "gold standard," or dependent variable in the study. Although there are differences of opinion as to the appropriateness of using the clinician's judgment as a gold standard, it was chosen as such because clinicians traditionally have been called upon to make such determinations in courts of law and in hospital settings.

Two clinical interns conducted the clinical assessments, working under the close supervision of a senior licensed clinical psychologist, who has more than 10 years of experience in assessing competence among older adults. The senior clinician involved in the study assembled a battery of tests that she ordinarily uses to determine competence. The clinicians made their assessments of competence based on a battery that began with a brief, semistructured interview of social, medical, and psychiatric history, and continued with the following tests: WAIS-R Digit Span (Wechsler, 1981); a cognitive screening battery — either the Neurobehavioral Cognitive Status Examination (Kiernan, Mueller, Langston, & Van Dyke, 1987; Schwamm, Van Dyke, Kiernan, Merrin, & Mueller, 1987) or the Dementia Rating Scale (Mattis, 1976), depending on the clinician's initial assessment of cognitive ability; WMS-R Logical Memory I (Wechsler, 1987); WAIS-R Comprehension and Similarities (Wechsler, 1981); Geriatric Depression Scale (Brink et al., 1982; Yesavage, 1986); Short Psychiatric Evaluation Schedule (Pfeiffer, 1979); and WMS-R Logical Memory II (Wechsler, 1987). Residents were also directly questioned about their preferences in several medical decision-making scenarios.

Together, the clinicians integrated information from the battery in order to arrive at a competence rating using a six-point Likert scale ranging from excellent capacity (6) to extremely poor capacity (1) in each of these domains: (a) life support measures and advanced directives for end-of-life decisions; (b) current medications and other medical treatments; (c) preventive procedures (e.g., dental care); (d) everyday care (e.g., degree of choice expressed for recreational activities and basic hygiene); (e) end-of-life decisions regarding feeding and hydration; and (f) attitudes regarding surgical procedures. Ratings in each of the six areas were highly correlated with each other (ranging from .63 to .84, $p < .001$). The ratings were then summed to create an index reflecting competence to participate in medical decisions. Scale scores ranged from 10 to 34 (M = 21.32). Coefficient alpha for the scale was .94. In the analyses that follow, competence to participate in medical decisions is treated as both a continuous variable and as a dichotomous variable (competent vs noncompetent), in consultation with the clinicians. When used as a dichotomous variable, residents classified as competent were those scoring four or higher on five of the six domains. Using these criteria, 22 people were classified as competent; 28 were classified as not competent (including 10 who were not competent in any domain, 12 who were competent in one or two domains, and 6 who were competent in three or four domains).

Results

Bivariate correlations among study variables may be found in Table 1. Competence to make medical decisions (Competence) correlated significantly with the MMSE, Hopemont, Disclosure, and Recognition scores, with correlations ranging from .60 to .70.

Table 1. Bivariate Correlations

	MMSE	Hopemont	UTD-Disclosure	UTD-Recognition	Competence
MMSE	1.00				
Hopement	.66	1.00			
UTD-Disclosure	.50	.68	1.00		
UTD-Recognition	.68	.62	.60	1.00	
Competence	.70	.61	.45	.60	1.00

Note. All coefficients significant at .01 level.

Correlations among the independent variables ranged from .50 to .68. No significant correlations existed between years of education, length of stay, number of medications, and number of diagnoses, nor between any of the independent variables or the dependent variable. A significant negative correlation was found between age and both the Hopemont score and Disclosure score.

The goal of the following analyses was to categorize residents as competent or not competent, as determined by the clinicians, using the fewest number of objective measures. These statistical procedures included: (a) Identifying those independent variables that best predicted Competence using a stepwise regression. (b) Treating as competent residents scoring 23 or higher (classified as competent by the clinicians on five of the six domains); a discriminant analysis examined correctly and incorrectly classified cases using only those variables identified in Step 1 that contributed significant, unique variance to predicting Competence. (c) Identifying residents whose scores were within the range of scores of residents classified incorrectly. (d) Identifying whether any of the remaining independent variables not found to be significant predictors of Competence in Step 1 were significant for the reduced sample using stepwise regression. (e) Using discriminant analysis to classify cases using only those variables identified in Step 5 that contributed unique variance to predicting Competence for the reduced set of residents. (f) Identifying the range of scores for residents who were classified incorrectly in Step 5. In order to assure that the data met the assumptions of the statistics, e.g., at least 10 respondents for each independent variable, each equation included no more than four independent variables.

Results from the initial stepwise regression analysis are illustrated in Table 2. These data indicate that 58.0% of the variance in Competence was explained, with two of the independent variables, MMSE and Recognition, having effects that were statistically significant at the .05 level.

The discriminant analysis, treating MMSE and Recognition as the independent variables and the dichotomously scored competence score as the dependent variable, correctly classified 86% of the cases, with only seven cases being incorrectly classified (four whom the clinicians rated as not competent, and three whom the clinicians rated as competent). Examination of the range of scores on the MMSE and Recognition for these cases indicated that MMSE scores ranged from 18 to 26, and Recognition

Table 2. Summary of Regression Analysis for Variables Predicting Resident Competence as Rated by Clinicians (N = 50)

Variable	b	SE b	Beta
MMSE	.60	.23	.37*
Recognition	.59	.25	.34*
Disclosure	−.16	.26	−.08
Hopemont	.41	.29	.22

Notes. R^2 = .58; Adjusted R^2 = .54; F = 15.57, *p < .001.

Table 3. Summary of Regression Analysis for Variables Predicting Resident Competence as Rated by Clinicians (N = 29)

Variable	b	SE b	Beta
Hopemont	1.05	.42	.60*
Disclosure	−.30	.43	−.17

Notes. R^2 = .24; Adjusted R^2 = .18; F = 4.17, *p < .05.

scores ranged from 5 to 14. Among the total sample, 29 residents had scores falling within these ranges.

Results from the second stepwise regression (based on the reduced sample size of 29 cases) are presented in Table 3. These analyses revealed that together, Disclosure and Hopemont explained 24.3% of the variance in Competence, with only the Hopemont being statistically significant. Entering the Hopemont into a discriminant analysis revealed that 69.0% of the 29 cases were correctly classified, while nine were incorrect (four classified by the clinicians as not competent; five classified by the clinicians as competent). The majority of these cases (all but two) had Hopemont scores ranging from 13–18. Seventeen of the original 50 cases (34.0%) fell within this range.

Discussion

Residents of long-term care facilities have the right to be involved in decisions about their medical care. However, staff often are unsure about whether a resident is competent to participate in making these decisions. Currently, evaluations of competency to participate in decisions about medical care are made in a very subjective manner. Data reported here tentatively suggest that the competence of a majority of nursing home residents to make decisions about their medical care can be determined by assessments that are objective, reliable, and relatively brief.

A staged procedure for determining competence to participate in decisions about medical care is suggested. It is suggested that this procedure be in-

voked when a specific medical decision needs to be made about a resident. Although on legal grounds, adults are presumed to possess autonomy and decision-making competence unless there is reason to question this capability, and this right is not diminished by age or residence, the fact that the majority of residents of long-term care facilities suffer from cognitive loss indicates that this recommendation is well-founded.

A central aspect of determining competence of long-term care residents is establishing rapport between the resident and the examiner. The procedures suggested by these analyses can easily be followed by existing nursing home staff. As such, the person assessing the resident's competence will most likely be a nurse or social worker with whom the resident is familiar. The resident should be told that the assessment will be brief, and that results will be important in helping to make decisions about their medical care. If, as in the case of this study, the evaluator is unfamiliar to the resident, extra attention needs to be given to establishing rapport and making the resident feel comfortable about the process.

The staged procedure includes first assessing the resident with the MMSE and the Recognition questions from the UTD. Residents with MMSE scores below 18 and Recognition scores below 5 would be judged incompetent to participate in decisions about their medical care; residents with MMSE scores over 26 and Recognition scores over 14 would be judged competent to participate in decisions about their medical care. In these analyses, 40 percent of the residents participating in the project could be correctly classified as competent or not competent based only on their MMSE and Recognition scores.

The competence of residents whose MMSE scores range from 18 to 26 and whose Recognition scores range from 5 to 14 is less certain. In this study, the additional information provided by the Hopemont questionnaire revealed that residents scoring less than 13 on the Hopemont (and falling within the uncertain range based on MMSE and Recognition scores) were incompetent to make medical decisions, while those scoring higher than 18 were competent to make medical decisions. The inclusion of the Hopemont questionnaire resulted in the ability to correctly classify an additional 24 percent of residents in this study. These three instruments appeared to predict decision-making competence best in that they directly related to residents' ability to comprehend a situation involving medical care, consider treatment options, and come to a rational decision (Gerety et al., 1993; Pellegrino & Thomasma, 1988).

In the interest of simplicity and cost-effectiveness, this protocol includes the MMSE, which served as a useful screening criterion. While Krynski, Tymchuk, and Ouslander (1994) found that the MMSE was a perfect predictor of performance on a comprehension test, results from these analyses indicate that more information is necessary in order to evaluate the competence of a nursing home resident to participate in decisions regarding his/her medical care. In

this respect, results from this study are similar to those reported by Janofsky, McCarthy, and Folstein (1992), who found that the MMSE alone failed to differentiate competent patients from incompetent patients with reasonable sensitivity or specificity. Janofsky et al. (1992) concluded that specific tests of competency are needed in addition to standard psychological measures such as the MMSE. Although it is a useful first step in a battery of tools aimed at assessing competence to participate in decisions about medical care, the MMSE is not without limitations. The MMSE is at least somewhat dependent on education, and highly dependent on visual and hearing impairment. Because of these limitations, it is suggested that people with sensory impairments, aphasia, or low levels of education should automatically be referred to a clinical psychologist for competence assessment. In these cases, as well as in cases where a resident falls in the gray area of competence according to the objective tests, the capacity to participate in decisions about medical care is more difficult to determine. This is when the expertise of a clinical psychologist is needed. Psychologists' training in assessment and interviewing, as well as their ability to integrate this information, makes them key players in determining competence in the long-term care setting (Hartman-Stein, 1994).

Caution in generalizing results from this study is suggested for two reasons. First, the sample included only residents of one nonprofit, Jewish nursing home; and second, the sample size was relatively small. In order to feel confident in the somewhat arbitrary cutoffs for determining competence, studies using larger samples of residents, residents who are more heterogeneous, and residents living in a variety of nursing homes are needed to replicate and cross-validate these findings.

The analyses presented here are preliminary, and suggest several areas for future research. First, there is a need for research, relating to the validity of the competence ratings. A study in which several clinicians evaluate and rate the same residents would provide important information about the validity of competence ratings. Second, research focusing on the way in which ratings of competence correspond to residents' performance in actual decision-making situations would further knowledge regarding the meaning of the competency assessments. Third, further research regarding the predictors of competence would be important. Finally, research is needed that is focused on residents who cannot make decisions about their own medical care. Work in the area of "proxy" decision-making is crucial, since so many residents of long-term care facilities are not competent to make their own decisions. Issues to be addressed include who should be responsible for making decisions about medical care, what role medical personnel should have in the decision-making process, and how differences of opinion among family members should be resolved.

The procedures followed in the study would enable staff of long-term care facilities to assess the competence of the majority of nursing home resi-

dents using an objective and brief protocol that can be administered in less than 40 minutes. Information generated from these analyses should have some applicability to community-dwelling elderly as well as elderly people living in long-term care facilities, since for every nursing home resident, there are two older adults living in the community with similar levels of impairment.

These data are intended to provide some direction to the staff of long-term care facilities who are mandated by federal regulations to include all those residents who are competent in decisions about their medical care. The objectivity of the measures helps to remove some of the doubt regarding who should and who should not be included in the decision-making process. The use of these simple, reliable measures may make it possible for increased participation by long-term care residents in decisions about their own medical care.

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