

Predictors of Site of Death of End-of-Life Patients: The Importance of Specificity in Advance Directives

RENÉE PEKMEZARIS, Ph.D.,¹ LORRAINE BREUER, M.A.,¹ ARTURO ZABALLERO, M.S.,¹
GISELE WOLF-KLEIN, M.D.,¹ ERUM JADOON, M.D.,¹ JAMES T. D'OLIMPIO, M.D.,²
HOWARD GUZIK, M.D.,² CORNELIUS J. FOLEY, M.D.,¹ JOSEPH WEINER, M.D., Ph.D.,²
and SUSANNA CHAN¹

ABSTRACT

Despite the compelling reasons for advance directives and their endorsement by the public and medical professions, little is known about their actual use and impact on site of death. This study was conducted to examine the role of advance directives and other “drivers” of hospitalization of the long-term care end-of-life patient. The medical records of 100 deceased consecutive nursing home residents, stratified by site of death (skilled nursing facility or acute care hospital), were reviewed by a team of geriatric researchers to obtain patient information in the following domains: sociodemographic, advance directives, transfer and death information, patient diagnoses at admission, discharge, and other time intervals; medication usage and signs and symptoms precipitating death. Severity of illness was assessed using the Cumulative Illness Rating Scale-G (CIRS-G). In testing for differences between patients by site of death, sociodemographic variables (gender, age, race, payer at discharge, cognitive capacity) did not significantly differ between the two groups of patients. Strong similarities between the groups were also found in terms of severity of illness and medication usage. Significantly higher proportions of patients dying in the nursing home had specific advance directives (do not resuscitate, do not intubate, do not artificially feed, do not hydrate, and do not hospitalize), as opposed to those dying in the hospital. The findings of this study demonstrate the impact of the explicit advance directive on the decision to transfer the patient to the acute care setting at the end of life.

INTRODUCTION

ONE OF THE MOST CRITICAL decision points in the care of a long-term care resident is the decision whether to hospitalize the patient in the last months of life.¹ Unfortunately, few older patients formalize their treatment wishes through the use of an advance directive,² despite the fact that previous research consistently documents patient support for the use of advance direc-

tives.³⁻⁵ As a result, patients are often transferred in the last few days before death, increasing patient and family distress.^{6,7}

There are no clear delineations as to the roles and responsibilities of the patient, family member and health care team regarding the decision process of whether to transfer a long-term care patient to an acute care setting at the end of life.^{8,9} Although family members are key end-of-life decision makers, they are often confused by the

¹Parker Jewish Institute for Health Care and Rehabilitation, New Hyde Park, New York.

²North Shore-Long Island Jewish Health System, Long Island, New York.

complexity and the urgency of care options, such as hospital transfers.⁸ While a physician's order is required to initiate a hospital transfer, the decision to transfer is also highly dependent on the judgment of the nurse. This is particularly true in an emergency situation in which communication with the physician may be accomplished by phone. The substance and amount of clinical and nonclinical information is dependent upon the assessment and judgement of the nurse.⁸ The decision to hospitalize is thereby potentially influenced by a number of factors. Family members, the attitudes and judgments of physician and nurse, in addition to the patient's expressed wishes (including documented advance directives) all contribute to a complex decision-making process.

Previous research suggests that reasons for the transfer of end-of-life patients should be carefully examined. Fried and Mor⁶ demonstrated that long-term care patients with multiple comorbidities who require intense nursing care are the most likely patient cohort to be transferred to the hospital prior to death, although this transfer is least likely to be of benefit to the patient and to the grieving family.

Despite the compelling reasons for advance directives and the endorsement of the public and medical profession of their use,³ there is little known about their actual use.¹⁰ The objective of this study is to clarify the role of advance directives in the hospitalization of skilled nursing facility end-of-life patients.

The body of literature relevant to end-of-life planning, especially as related to elderly individuals, often documents inconsistency between support for the use of advance directives (AD) and their observed ineffectiveness in achieving patient-directed care. While references to ADs appear in medical and legal literature prior to the enactment of the Patient Self-Determination Act (PSDA) in 1990, that legislation has stimulated much of the more recent discussion. The mandate of the PSDA, requiring that health care institutions inform patients of their right to prepare advance directives and further requiring documentation of such directives in the medical record, has generated research interest about the increased completion and effectiveness of advance directives.¹¹⁻¹⁴ Previous research relevant to this study relate to three major areas: (1) efforts to increase the completion of advance directives among the elderly, (2) effectiveness in promoting

patient self determination, and (3) outcomes of ADs on the utilization of healthcare resources at the end of life.

Efforts to increase the completion of advance directives among the elderly

Studies in this category concern efforts to increase completion of advance directives and to understand impediments to increased use.^{2,15-20} The underlying assumption is that ADs are valuable in directing end-of-life care. High¹⁵ observes that few elderly persons complete ADs because they do not perceive an urgent need based on their current circumstances and because they have confidence that they will be able to rely on others for decision making. A group of studies focuses on communication between patient and physician as the critical element in rate of completion and note the reluctance of many physicians to initiate the conversation.^{2,16-19} Roter et al.¹⁹ points out that physicians expert in end-of-life care are more likely to spend a few more minutes (14.7 vs. 8.1) than community physicians in the AD discussion, giving less information about treatment and biomedical issues, concentrating more on psychosocial and lifestyle issues. Hines et al.²¹ conclude that both surrogates and patients tend to "... overestimate the surrogates' knowledge of the patients' wishes." They recommend that physicians and other health care professionals become more active in assisting surrogates in fulfilling their role in end-of-life planning and that these conversations be conducted over time in stages.²¹

Effectiveness in promoting patient self-determination

Despite the emphasis on increasing completion, several studies caution against optimism over the effectiveness of ADs. They cite evidence that the presence of ADs does not consistently result in the specified treatment preferences.^{13,22} Brett¹³ notes that ADs alone often cannot anticipate treatment complexities and, therefore, may be overridden by health care professionals or family members where instructional ADs may limit interventions felt to be of benefit or where they request treatment felt to be of no further benefit. Communication between health care providers and surrogates regarding end-of-life decisions in the presence of ADs is the focus of a

substantial body of research. Of note are studies concluding that directives alone, such as living wills, have little effect on care in the absence of consultation and interpretation of the patient's wishes.^{2,23-27} Teno et al. observe that advance directives found within the medical charts of hospitalized terminally ill SUPPORT patients generally did not guide medical decision-making beyond naming a proxy or documenting general preferences.²⁵ While a standard living will may indicate a patient's preference to die rather than live a "precarious existence," they do not explicitly define when that point has been reached. Furthermore, Teno et al.²⁴ indicate that communication between provider and patient requires some level of specificity.

Thus, standard living wills do not effectively direct care decisions for seriously ill adults. This may not have been true 30 years ago when resuscitation and ventilators were used more indiscriminately, even for patients whose chance for survival were vanishingly small. In that environment, even a standard living will may have had an effect. . . . Our study does attest to the absence of communication between healthcare providers and patients and that directives did not provide specific instructions that would obviate such communications.²⁵

Ditto et al.,²⁶ in a study of elderly outpatients randomly assigned to one of five experimental conditions, conclude that even when specificity, exists, patient self-determination is inconsistent.

The novel contribution of our study is its unequivocal demonstration of the ineffectiveness of both instructional ADs and patient-surrogate discussion to improve the accuracy of surrogate substituted judgment. . . . The ineffectiveness of an AD document alone to improve surrogate decisions might have been expected based on past writings skeptical of the usefulness of written directives in the absence of a broader process of advance care planning. More surprising was the finding that supplementing a written directive with guided patient-surrogate discussion was equally ineffective.²⁶

Degenholtz and Rhee,²⁸ on the other hand, point out that most of the studies confirming in-

consistency with advance directives and actual treatment, including the SUPPORT study, have been conducted in acute care settings, which may not be generalizable to the nursing home end-of-life population.²⁹

Sonnenblick et al.²⁰ add the dimension of cultural variance and familial ties. They note that cultural emphasis on the value of life may hinder efforts to promote ADs. They also observe that lack of objectivity among offspring may interfere with decisions that reflect their parents' preferences.²⁰

Barnard,³⁰ however, takes issue with the approach that advance care planning can be considered effective only when the surrogate makes a judgment—getting it right—that replicates what the patient would have decided.

The purpose of having conversations with patients is not to enable us to make the same decision about a treatment that the patient would have made—that is a fiction—but to give patients and families the opportunity to say things that matter to them in the face of critical illness or impending death. This is a patient-centered standard, rather than the survivor-centered standard that prevails at present.³⁰

Outcomes on the utilization of health care resources at the end of life

A group of studies have examined the relationship between resource utilization at end of life and advance directives.³¹⁻³⁴ Teno et al.³² note that the increase in documented ADs subsequent to the PSDA and the SUPPORT intervention did not result in lower resource utilization, which may be the result of the general ineffectiveness of ADs in directing treatment options. Emanuel and Emanuel³¹ present data that project little health care cost savings resultant from changes in end-of-life practices. While suggesting that further study of the impact of ADs on resource utilization is needed, they conclude that wider use of ADs is not likely to produce significant cost savings.³¹

Weeks et al.,³³ however, found that tertiary hospital patients without ADs have higher terminal care costs than those with ADs. Their study suggests that the patient's preference for limiting care does have an effect on lowering costs at the end of life. Molloy et al.³⁴ came to a similar conclusion in a randomized controlled study of nurs-

ing home residents. They note that the intervention provided much more comprehensive advance directive choices than the standard and attribute lower rates of hospital transfers to staff observing do not hospitalize instructions.³⁴ In her editorial, however, Teno³⁵ cautions that the lower rate of hospitalization can be justified only if "... that result reflects the informed preferences of a competent nursing home patient or an appropriate surrogate decision maker and if the decision not to hospitalize did not reduce the quality of end-of-life care.

METHODS

The study was conducted at the Parker Jewish Institute for Health Care and Rehabilitation (PJI), a 527-bed, non-profit skilled nursing facility located in New Hyde Park, New York.

The medical records of 100 deceased nursing home residents were reviewed extensively by a team of geriatric researchers to obtain patient information in the following domains: sociodemographic, advance directives, transfer and death information, patient conditions or diagnoses at admission, discharge, and other time intervals; medication usage and signs and symptoms precipitating death. The medical records were stratified consecutively by site of death: the skilled nursing facility or the acute care hospital setting. To determine the severity of illness for each patient, the team of researchers, including a geriatrician, used the Cumulative Illness Rating Scale-G.³⁶

Researchers reviewed patient charts to determine whether the patient had specific advance directives. For the purposes of this study, advance directives were defined as clear patient wishes regarding end-of-life care within the patient chart. The origins of these directives included any of the following: (1) an order signed by the physician of record; (2) information regarding end-of-life wishes contained within a living will; (3) information regarding end-of-life wishes contained within a health care proxy designation form, and (4) information regarding end-of-life wishes contained within social work advance directive processing forms. The directives specifically assessed included wishes regarding: resuscitation, intubation, artificial nutrition, hydration and hospitalization. Statistical calculations were made with SPSS software (SPSS, Inc., Chicago, IL). The records of 7 (inpatient) hospice patients were

eliminated from the analysis. The reasoning for their elimination was relatively straightforward: it was anticipated that these patients, simply by virtue of their classification as hospice patients, would likely confound the relationship between AD and site of death of traditional nursing home patients, because acute care utilization patterns of hospice care patients are generally less aggressive.

Comparisons between categorical variables were made with the Pearson χ^2 test and Fisher's exact test for expected frequencies of less than 5. For interval data, the Student's unpaired *t* test was utilized.

RESULTS

Data from 93 charts yielded 43 (46%) nursing home and 50 (54%) hospital deaths. Females comprised the majority of patients (72.1%) who died in the nursing home; males accounted for 27.9% of nursing home deaths. This pattern was similar for hospital deaths: the majority of hospital deaths were female (60.0%), while males accounted for 40% of hospital deaths. Catholicism and Judaism were the two categories most commonly reported for religion, accounting for 38% and 33% of the sample, respectively. The mean age at admission for the nursing home was 84.6 years and for the hospital was 82.0 years. There were no significant differences for age by site of death ($t = 1.22$, $df = 88$, $p = 0.225$). It was also found that the majority of patients evaluated in this study were white (81.7%), while blacks (14.0%) and Asian/Pacific Islanders (4.3%) were represented in lower proportions. The do-not-resuscitate (DNR) order was the only AD found in the majority (70%) of the charts. All other types of directives were each found in smaller numbers of patient charts: 24.7% of patients requested no intubation (DNI); 17.2% of patients requested do not artificially feed; 9.7% of patients requested no hydration; and 12.9% of patients requested no hospital transfer. Interestingly, exactly 40% of patients, regardless of site of death, had health care proxies on file in the chart ($\chi^2 = 3.9$, $p > 0.05$).

In testing for differences between the groups, it was found that for the vast majority of variables analyzed, the groups were markedly similar. Table 1 presents similarities and differences of key variables between the site of death groups. Gender did not differ significantly by site of death ($\chi^2 = 1.50$,

$df = 1, p = 0.221$). Race did not differ between the groups, ($\chi^2 = 4.32, df = 2, p = 0.133$), nor did principal payer at the time of discharge ($\chi^2 = 1.71, df = 2, p = 0.425$). Cognitive capacity also did not significantly differ between the two groups of patients ($\chi^2 = 3.05, df = 1, p = 0.081$).

Striking similarities between the groups were also found in terms of severity of illness. Figure 1 presents Cumulative Illness Rating Scores (CIRS-G), by group ($t = 1.23, df = 91, p = 0.223$). In addition, the number of conditions were virtually the same ($t = 0.119, df = 91, p = 0.905$). As expected, then, the ratio of severity of conditions to number of conditions was also not significantly different by group ($t = 1.33, df = 91, p = 0.185$). Table 2 shows that the total mean number of medications prescribed during the 2-year period before death also did not differ ($t = 1.157, df = 91, p = 0.250$) between the groups.

Supporting further the similarity for severity of illness, the average patient length of stay in the nursing facility was 52.6 months for the nursing home group and 50.6 months in the hospital group. There were no significant differences in the length of stay ($t = 0.113, df = 91, p = 0.910$).

There were, however, some key differences between the groups. Patients who died in the hospital had a higher mean number of previous hospitalizations during their nursing facility stay ($t = 2.41, df = 91, p = 0.018$).

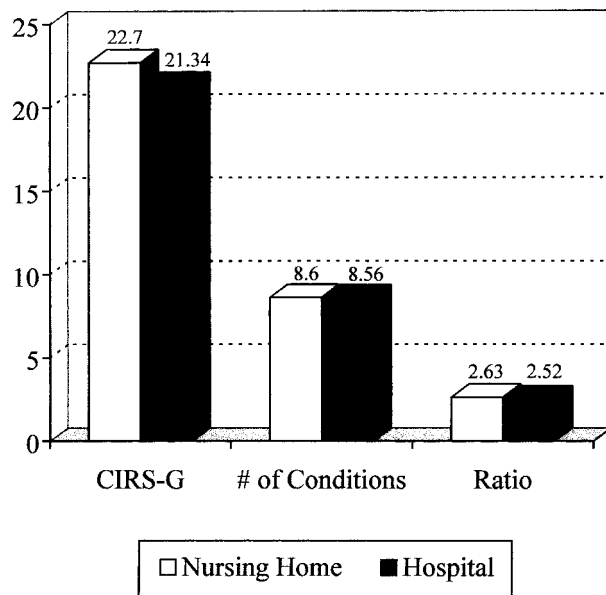


FIG. 1. Mean cumulative illness rating scores by site of death.

With respect to ADs, the existence of five specific directives in patient charts was found to significantly differ between the groups. Significantly higher proportions of patients dying in the nursing home had a DNR order, compared to those dying in the hospital ($\chi^2 = 20.34, df = 1, p = 0.000$). Similarly, significantly higher proportions of patients dying in the nursing home had a DNI directive existing in the chart, as opposed to those dying in the hospital ($\chi^2 = 6.69, df = 1, p = 0.010$). In terms of nutrition and hydration directives, significantly higher proportions of patients dying in the nursing home had do-not-artificially-feed and do-not-hydrate directives, as compared to those dying in the hospital ($\chi^2 = 6.43, df = 1, p = 0.011$; $\chi^2 = 3.99, df = 1, p = 0.050$, respectively). Finally, do-not-hospitalize directives were found in significantly higher proportions of nursing home deaths than hospital deaths ($\chi^2 = 16.02, df = 1, p = 0.000$). Almost one third (28%) of the patients who died in the nursing home had a do-not-hospitalize directive. Not one of the patients with a do-not-hospitalize directive in their chart was found to have died in the hospital.

The frequency of transfer orders differed somewhat by day of the week, varying from a low of 4 on Wednesdays to a high of 15 transfers on Tuesdays. The time of the transfer order was also considered and seemed to differ somewhat: 24% of transfers occurred in the day (AM) versus 30% in night (PM). When we looked at physician transfer patterns to see whether individual physicians or physician type (attending, covering, fellow) accounted for any of these differences, small cell sizes rendered the data inconclusive.

DISCUSSION

This study demonstrates that the existence of specific ADs in the chart impacts on the decision to transfer the patient at end of life. When comparing the percentages of charted DNR orders of this retrospective chart review (70%) to those conducted previously^{37,38} the findings are strikingly similar (74% and 73%, respectively).

The 1998 study by Teno et al.²⁴ intended to produce explanations for how ADs either facilitated or failed to facilitate decision making and resulted in the identification of three main themes of AD failure: (1) patients were not seen as hopelessly ill; (2) unavailability or ineffective surro-

TABLE 1. SIMILARITIES AND DIFFERENCES BETWEEN SITE OF DEATH GROUPS

<i>Resident characteristics of site of death groups (nursing home or hospital)</i>	<i>No significant differences</i>	<i>Significant differences</i>
Average number of medications	✓	
Health care proxy	✓	
Gender	✓	
Race	✓	
Principal payer	✓	
Cognitive capacity	✓	
Number of conditions	✓	
Severity of conditions	✓	
CIRS ratio	✓	
Length of stay	✓	
Average number of hospital admissions		✓
DNR directive		✓
DNI directive		✓
Nutrition directive		✓
Hydration directive		✓
Artificial feed directive		✓
Hospitalization directive		✓

CIRS, Cumulative Illness Rating Scale; DNR, do not resuscitate; DNI, do not intubate.

gate advocacy for the patient; and (3) the contents or intent of the AD were vague. It is this last factor that the present study addresses.

The present study found a strong association between do-not-hospitalize directives and lower

rates of hospitalization, contradicting those of an earlier study which found a lack of association between do-not-hospitalize orders of long term care residents and lower rates of hospitalization.⁶ The data used in the Fried and Mor study, how-

TABLE 2. MEDICATION SUMMARY

<i>Class of medications</i>	<i>Place of death</i>			
	<i>Nursing home</i>		<i>Hospital</i>	
	<i>Number</i>	<i>Percentage (%)</i>	<i>Number</i>	<i>Percentage (%)</i>
Cardiovascular agents	84	12.3	128	15.7
Analgesics/antipyretics	72	10.5	70	8.6
Metabolic agents	28	4.1	46	5.6
Antimicrobials	53	7.7	34	4.2
Blood modifiers	21	3.1	28	3.4
Hormonal agents	10	1.5	11	1.3
CNS agents	40	5.8	53	6.5
Gastrointestinal agents	93	13.6	104	12.7
Ophthalmic agents	16	2.3	24	2.9
Antineoplastics	7	1.0	8	1
Respiratory agents	22	3.2	45	5.5
Genitourinary	2	0.3	7	0.9
Dermatologic agents	47	6.9	49	6
Immune system agents	0	0	2	0.2
Nutritionals	120	17.5	143	17.5
Otic agents	0	0	2	0.2
Autonomic agents	6	0.9	7	0.9
Other therapeutic adjuncts	56	8.2	48	5.9
All others	8	1.2	7	0.9
Total	685	100	816	100

CNS, central nervous system.

ever, were extracted from assessment data of long-term care residents and excluded those residents who died or were transferred to another facility. The present study looks exclusively at nursing home residents at the end of life and their ADs. It may be that the differences between the two studies is accounted for by the fact that the present study looked at patients at end of life, and considered all directives and official physician orders, whereas the Fried and Mor study looked only at official physician orders. Perhaps considering physician orders alone without other indications of patient directives found in the chart regarding hospitalization may not adequately capture all available information regarding the patient's wishes.

Although the findings of this study demonstrate the impact of the AD on the complex decision-making process regarding whether to transfer the nursing home patient to the acute care setting at end of life, the extent to which the existence of these directives impacts upon the judgment of the physician, nurse and family member cannot be determined from this analysis; nor can the clinical appropriateness of the decision to transfer be ascertained.

While it is noteworthy that 40% of both site of death groups had health care proxies, we cannot conclude that the proxy has no effect on the decision to transfer the patient. The patients ($n = 5$) with a specific do-not-hospitalize directive in fact were not hospitalized. It appears that for these patients, the health care proxy did not override the patients' wishes, however, the small number of such cases cannot be used to make any definitive judgement about the role of the proxy. This area of inquiry is particularly important because previous research has shown that elderly people strongly rely on proxy decision-making in the long-term care setting.⁵ More research on the role of the proxy is needed.

Even though the findings of this study support the importance of specificity in the process of determining nursing home patient wishes through the advance directives process, such specificity may not be valid for the general population of healthy adults. Brett¹³ presents a compelling argument against the use of directives regarding specific procedures, because it may "divert attention inappropriately away from treatment goals, does not necessarily enhance self-determination, and may provide a false sense of security. Brett¹³ instead advocates for wider use of health

care proxy directives with the general population. For nursing home patients, however, previous research has found that in fact there is considerable discordance between the decisions actually made by elderly long-term care residents and the decisions the proxies thought they would make.^{9,39} A similar study of hospitalized elderly patients found that more than half of the patients had not discussed their feelings about health care decisions with anyone.⁴⁰ Many patients may appoint a health care proxy, but do not discuss the details of their wishes such that when the time comes for critical decision-making, the health care proxy may be of limited use.

Other studies have shown clearly that advance directives influence place of death. The Physician Orders for Life-Sustaining Treatment (POLST) study shows that documenting patient wishes regarding life-sustaining treatment at nursing home admission results in better family and caregiver knowledge about patient wishes and high rates of DNR order completion.⁴⁴

Another randomized controlled trial conducted in Ontario, Canada, confirms that competent nursing home residents and families of incompetent residents are willing to complete ADs.³⁴ The study also strongly suggests that systematic implementation of a program to increase use of ADs reduces health care utilization and associated costs without affecting satisfaction or mortality.

Clearly, there is no substitute for collective, informed decision-making and good clinical judgement, which requires an understanding of the expected trajectory of death, and the wishes and directives of the patient and family, not just by the physicians in charge, but also by nursing staff and families.

The fact that this study found that specificity of ADs impacts on the decision to transfer the nursing home patient at end of life underscores the need for further research to fully explain their importance in the decision-making process.

REFERENCES

1. Travis SS, Loving G, McClanahan L, Bernard M: Hospitalization patterns and palliation in the last year of life among residents in long-term care. *Gerontologist* 2001;41:153-160.
2. Zweibel NR, Cassel CK: Treatment choices at the end of life: A comparison of decisions by older patients and their physician-selected proxies. *Gerontologist* 1989;29:615-621.

3. Gallup G, Newport F: Mirror of America: Fear of dying. Gallup Poll News Service 1991;55:3-5.
4. Gamble ER, McDonald PJ, Lichstein PR: Knowledge, attitudes, and behavior of elderly persons regarding living wills. *Arch Intern Med* 1991;151:277-280.
5. High DM: All in the family: Extended autonomy and expectations in surrogate health care decision-making. *Gerontologist* 1988;28(3 Suppl):46-51.
6. Fried TR, Mor V: Frailty and hospitalization of long-term stay nursing home residents. *J Am Geriatr Soc* 1997;45:265-269.
7. Ackerman RJ, Kemle KA, Vogel RL, Griffin RC Jr: Emergency department use by nursing home residents. *Ann Emerg Med* 1998;31:749-757.
8. Bottrell MM, O'Sullivan JF, Robbins MA, Mitly EL, Mezey MD: Transferring dying nursing home residents to the hospital: DON perspectives on the nurse's role in transfer decisions. *Geriatr Nurs* 2001;22:313-317.
9. High DM: Families' roles in advance directives. *Hastings Cent Rip S16-24:18*.
10. Emanuel LL, Barry MJ, Stoeckle JD, Ettelson LM, Emanuel EJ: Advance directives for medical care—A case for greater use. *N Engl J Med* 1991;324:889-895.
11. The SUPPORT Principal Investigators: A controlled trial to improve care for seriously ill hospitalized patients. The study to understand prognoses and preferences for outcomes and risks of treatments (SUPPORT). *JAMA* 1995;274:1591-1598.
12. Bradley EH, Wetle T, Horwitz SM: The Patient Self-Determination Act and advance directive completion in nursing homes. *Arch Family Med* 1998;7:417-423.
13. Brett AS: Limitations of listing specific medical interventions in advance directives. *JAMA* 1991;266:825-828.
14. Teno JM, Branco KJ, Mor V, Phillips CD, Hawes C, Morris J, Fries BE: Changes in advance care planning in nursing homes before and after the Patient Self-Determination Act: Report of a 10-state survey. *J Am Geriatr Soc* 1997;45:939-944.
15. High DM: Advance directives and the elderly: A study of intervention strategies to increase use. *Gerontologist* 1993;33:342-349.
16. Gordon NP, Shade SB: Advance directives are more likely among seniors asked about end-of-life care preferences. *Arch Intern Med* 1999;159:701-704.
17. Morrison RS, Morrison EW, Glickman DF: Physician reluctance to discuss advance directives. An empiric investigation of potential barriers. *Arch Intern Med* 1994;154:2311-2318.
18. Johnston SC, Pfeifer MP, McNutt R: The discussion about advance directives. Patient and physician opinions regarding when and how it should be conducted. End of Life Study Group. *Arch Intern Med* 1995;155:1025-1030.
19. Roter DL, Larson S, Fischer GS, Arnold RM, Tulskey JA: Experts practice what they preach: A descriptive study of best and normative practices in end-of-life discussions. *Arch Intern Med* 2000;160:3477-3485.
20. Sonnenblick M, Friedlander Y, Steinberg A: Dissociation between the wishes of terminally ill parents and decisions by their offspring. *J Am Geriatr Soc* 1993;41:599-604.
21. Hines SC, Glover JJ, Babrow AS, Holley JL, Badzek LA, Moss AH: Improving advance care planning by accommodating family preferences. *J Palliat Med* 2001;4:481-489.
22. Danis M, Southerland LI, Garritt JM, Smith JL, Hielema F, Pickard CG, Egner DM, Patrick LL: A prospective study of advance directives for life-sustaining care. *N Engl J Med* 1991;324:882-888.
23. Teno J, Lynn J, Wenger N, Phillips RS, Murphy DP, Connors AF Jr, Desbiens N, Fulkerson W, Bellamy P, Knaus WA: Advance directives for seriously ill hospitalized patients: effectiveness with the patient self-determination act and the SUPPORT intervention. SUPPORT Investigators. Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment. *J Am Geriatr Soc* 1997;45:500-507.
24. Teno JM, Stevens M, Spernak S, Lynn J: Role of written advance directives in decision making: Insights from qualitative and quantitative data. *J Gen Intern Med* 1998;13:439-446.
25. Teno JM, Licks S, Lynn J, Wenger N, Connors AF Jr, Phillips RS, O'Connor MA, Murphy DP, Fulderson WJ, Desbiens N, Knaus WA: Do advance directives provide instructions that direct care? SUPPORT Investigators. Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment. *J Am Geriatr Soc* 1997;45:508-512.
26. Ditto PH, Danks JH, Smucker WD, Bookwala J, Coppola KM, Dresser R, Fagerlin A, Gready RM, Houts RM, Lockhart LK, Zyzanski S: Advance directives as acts of communication: A randomized controlled trial. *Arch Intern Med* 2001;161:421-430.
27. Covinsky KE, Fuller JD, Yaffe K, Johnston CB, Hamelin MB, Lynn J, Teno JM, Phillips RS: Communication and decision-making in seriously ill patients: Findings of the SUPPORT project. The Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments. *J Am Geriatr Soc* 2000;48(5 Suppl):S187-193.
28. Degenholtz H, Rhee Y: Advance directives among the oldest old: Written advance directives among a cohort of 1994 decedents. *Gerontologist* 2001;41:119.
29. Goodman MD, Tarnoff M, Slotman GJ: Effect of advance directives on the management of elderly critically ill patients. *Crit Care Med* 1998;26:701-704.
30. Barnard D: Advance care planning is not about "getting it right." *J Palliat Med* 2002;5:475-481.
31. Emanuel EJ, Emanuel LL: The economics of dying. The illusion of cost savings at the end of life. *N Engl J Med* 1994;330:540-544.
32. Teno J, Lynn J, Connors AF Jr, Wenger N, Phillips RS, Alzola C, Murphy DP, Desbiens N, Knaus WA: The illusion of end-of-life resource savings with advance directives. SUPPORT Investigators. Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment. *J Am Geriatr Soc* 1997;45:513-518.

33. Weeks WB, Kofoed LL, Wallace AE, Welch HS: Advance directives and the cost of terminal hospitalization. *Arch Intern Med* 1994;154:2077-2083.
34. Molloy DW, Guyatt GH, Russo R, Goerce R, O'Brien BJ, Bedard M, Willan A, Watson J, Patterson C, Harrison C, Standish T, Strang D, Darzins PJ, Smith S, Dubois S: Systematic implementation of an advance directive program in nursing homes: A randomized controlled trial. *JAMA* 2000;283:1437-1444.
35. Teno JM: Advance directives for nursing residents: Achieving compassionate, competent, cost-effective care. *JAMA* 2000;283:1481-1482.
36. Linn BS, Linn MW, Gurel L: Cumulative illness rating scale. *J Am Geriatr Soc* 1968;16:622-626.
37. Levin JR, Wenger NS, Ourslander JG, Zellman G, Schnelle JF, Buchanan JL, Hirsch SH, Reuben DB: Life-sustaining treatment decisions for nursing home residents: Who discusses, who decides and what is decided? *J Am Geriatr Soc* 1999;47:82-87.
38. Maksoud A, Jahnigen DW, Skibinski CI: Do not resuscitate orders and the cost of death. *Arch Intern Med* 1993;153:1249-1253.
39. Ouslander JG, Tymchuk AJ, Rahbar B: Health care decisions among elderly long-term care residents and their potential proxies. *Arch Intern Med* 1989;149:1367-1372.
40. Cohen-Mansfield J, Droge JA, Billig N: The utilization of the durable power of attorney for health care among hospitalized elderly patients. *J Am Geriatr Soc* 1991;39:1174-1178.
41. Tolle SW, Rosenfeld AG, Tilden VP, Park Y: Oregon's low in-hospital death rates: what determines where people die and satisfaction with decisions on place of death? *Ann Intern Med* 1999;130:681-685.

Address reprint requests to:

Renée Pekmezaris, Ph.D.

Parker Jewish Institute for Health Care and

Rehabilitation

271-11 76th Avenue

New Hyde Park, NY 11040

E-mail: rpekmezaris@parkerinstitute.org