

Depression Among Surviving Caregivers: Does Length of Hospice Enrollment Matter?

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Objective: Many terminally ill patients enroll in a hospice late in their illness, and recent data indicate decreasing lengths of hospice enrollment, yet we know little about the impact of hospice enrollment length on surviving caregivers. This is the first study the authors know of that examines the association between hospice enrollment length and subsequent major depressive disorder among surviving caregivers.

Method: The authors conducted a prospective cohort study with 174 primary family caregivers of consecutively enrolled hospice patients with cancer between October 1999 and September 2001. Using data from in-person interviews at the time of enrollment and 6–8 months after the patient's death, they estimated with logistic regression the adjusted risk of major depressive disorder with the Structured Clinical Interview for the DSM-IV axis I

modules based on the number of days of hospice care before death.

Results: Caregivers of patients enrolled with hospice for 3 or fewer days were significantly more likely to have major depressive disorder at the follow-up interview than caregivers of those with longer hospice enrollment (24.1% versus 9.0%, respectively), adjusted for baseline major depressive disorder and other potential confounders.

Conclusions: The findings identify a target group for whom bereavement services might be most needed. The authors also suggest that earlier hospice enrollment may help reduce the risk of major depressive disorder during the first 6–8 months of bereavement, which raises concerns about recent trends toward decreasing lengths of hospice enrollment before death.

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Studies in the United States indicate that less than half of all terminally ill patients who are eligible for hospice services receive hospice care (1, 2). Furthermore, many patients who do receive hospice care enroll late in the course of their illness (3–5). Medicare data from 1990 indicate that the median enrollment time is only 36 days, with more than 15% dying within 7 days of enrollment (4). The U.S. General Accounting Office has recorded substantial decreases in the average length of hospice enrollment before death during the last decade (6), and the phenomenon of limited lengths of hospice enrollment is also apparent in countries other than the United States (7, 8). Experts in palliative care have suggested that decreasing lengths of enrollment in a hospice may have negative effects on patients and their family caregivers; however, limited empirical data exist to evaluate this claim. Previous studies have found greater caregiver satisfaction (9–12) and reduced caregiver anxiety (12–14) for those whose loved one received hospice compared to conventional care. However, we know of no published studies that compare caregiver outcomes based on the length of hospice enrollment among hospice users.

The objective of our study was to assess the impact of length of hospice enrollment on caregiver major depres-

sive disorder—a disabling and costly yet treatable disease—among recently bereaved caregivers. We hypothesized that caregivers of patients with fewer days of hospice enrollment would be at a heightened risk of a subsequent major depressive disorder. Evidence of a relationship between length of hospice enrollment and subsequent major depressive disorder of the surviving caregiver might identify a target group for whom bereavement services may be most needed as well as encourage earlier initiation of hospice treatment for appropriate patients.

Method

Study Design and Group

We conducted a prospective longitudinal study of 174 primary family caregivers of terminally ill adult patients with cancer who were consecutively enrolled between October 1999 and September 2001 in the largest hospice facility in Connecticut. Primary family caregivers were those whom the hospice nursing staff identified as providing the most care and planning for the terminally ill patients.

During the enrollment period, 391 caregivers were approached for participation in the study by a hospice staff research liaison. Of the 391, 100 caregivers indicated that they did not want to be contacted by researchers. Of the remaining 291, 28 could not be contacted because of incorrect or unlisted telephone numbers

TABLE 1. Baseline Characteristics of 174 Caregivers of Patients With Terminal Cancer Receiving Hospice Care, Between October 1999 and September 2001

Characteristic	Caregivers With Characteristic	
	N	%
Women	126	72.4
Age ≤65	125	71.8
White	166	95.4
Relationship to patient		
Spouse	53	30.5
Daughter	67	38.5
Son	23	13.2
Other	31	17.8
Education		
High school or less	54	31.0
More than high school	120	69.0
Income		
<\$30,000	34	22.8
\$30,000–\$69,000	63	42.3
≥\$70,000	52	34.9
Missing data	25	
Had at least one chronic condition	133	76.4
Assistance provided to patient		
Two or more instrumental activities of daily living	118	69.8
One or more activities of daily living	108	63.1
Missing data	8	
Major depressive disorder at baseline	45	25.9
	Mean	SD
Age (years)	57.0	13.0
Duration of caregiving (months)	14.6	28.0
Caregiver burden according to modified 9-item Zarit Burden Scale ^a	8.7	5.2

^a Higher scores indicated greater burden or less gratification; possible score, 0–24.

and addresses, 51 refused to participate, and six were too ill or cognitively impaired to participate in the study. Thus, the study group at baseline was 206 caregivers, which was 53% of the 391 caregivers originally approached, for an 81% participation rate of those contacted by researchers (51 refusers of 263 caregivers contacted). All participants provided their written informed consent to participate, using procedures approved by the institutional review boards of the Yale School of Medicine and of the hospice organization where the study was conducted. In chi-square and *t* test analyses, no significant differences in gender distribution, kinship relationship to the patient, or number of days enrolled in a hospice were apparent between the caregiver participants and nonparticipants.

Of the 206 caregivers participating in the initial phase of the study, 203 were eligible for interviews approximately 6 months after the patient's death. In three instances, the patient did not die within 1 year after the initial hospice enrollment, thus, the caregivers were not eligible for the follow-up interview; 25 refused to participate (mostly because of time constraints), two were too ill to participate, and two could not be contacted after repeated attempts. Thus, the final group size was 174 caregivers, or 85.7% of 203 eligible respondents who completed the baseline interview. Based on chi-square and *t* test analyses, the caregivers who refused to participate at this stage did not differ from those who participated in terms of gender distribution, kinship relationship to the patient, prevalence of baseline major depressive disorder, and the number of days the patient was enrolled in a hospice.

Data Collection

Baseline interviews with caregivers were conducted face to face and were attempted before the death of the patient; however, this was not always possible. The caregivers of 76 patients were interviewed before the death of the patient, and 130 were interviewed within the month after the death. Follow-up interviews were arranged by telephone and attempted in person 6–8 months after the patient's death. Both baseline and follow-up interviews were conducted at the location where the caregiver indicated that he or she would be most comfortable, typically either at the hospice or at home.

Measurements

The primary outcome was major depressive disorder, which was assessed at both the baseline and follow-up interviews with the major depressive disorder module of the Structured Clinical Interview for the DSM-IV (SCID) axis I modules (15). The SCID is a widely used instrument for establishing psychiatric diagnosis, with well-established reliability and adequate validity (16). Both at baseline and follow-up, we assessed the current prevalence of major depressive disorder. All interviews were conducted by a master's-level prepared social worker with extensive experience in administering the SCID.

The primary predictor variable was the number of days of hospice enrollment before the death. The number of days included the days enrolled with home hospice care and the days enrolled with inpatient hospice care. For the vast majority of caregivers (196 of 206 in the study), the patient died during the initial hospice enrollment, and hence, the number of days of hospice care was equal to the number of days between the initial hospice enrollment and death. For seven caregivers, the patient was discharged from the initial hospice enrollment while alive and subsequently died. For those patients, all hospice days used between the initial enrollment and death were included, even if the days were part of a second enrollment period. We reran the final model excluding these seven patients, but their exclusion did not change the results materially.

We chose to examine particularly short hospice enrollment periods because hospice staff suggested that the short enrollment times did not allow for the full services and benefits of hospice care for both families and patients. In preliminary surveys, many hospice staff perceived 3 days as inadequate time for the necessary family meetings, family and patient discussion of preferences and planning, and implementation of comprehensive hospice care. Therefore, we analyzed the total days of hospice enrollment before death as a dichotomous variable, coded as 3 or fewer days of hospice enrollment compared to longer enrollments. The sociodemographic characteristics included the caregiver's age, gender, educational level, annual income, marital status, religiousness, and kinship relationship to the patient. Caregiver burden was assessed with a modified Zarit Burden Interview (17), with six items to measure caregiver burden and three items to measure caregiver gratification. The duration of caregiving (in months) before hospice enrollment was self-reported at the initial interview. Social support was measured with three items: frequency of contact with close friends or family, difficulty obtaining help with daily activities (e.g., grocery shopping, cleaning, cooking), and difficulty obtaining emotional support. Self-reported measures of health were limitations in instrumental activities of daily living (18), limitations in basic activities of daily living (19), and the number of chronic conditions of the caregiver. We also measured service use at the baseline and follow-up interviews: days of hospital or nursing home care before hospice enrollment, the type of hospice used (home or inpatient), and the use of bereavement services after the death. At baseline, we asked the caregivers how many weeks before hospice enrollment a physician first told them that the illness could not be cured, the phy-

sician's prognosis at that time, when they as caregivers first knew that the illness could not be cured, what they thought the prognosis was at that time, and when the caregiver first knew it was time to use hospice care.

Data Analysis

We used logistic regression analysis to estimate the unadjusted associations between major depressive disorder at follow-up and having short hospice enrollment before death (3 days or fewer). We fit three logistic regression models to compare unadjusted and adjusted associations of length of hospice enrollment and major depressive disorder at follow-up. The first included only the primary independent variable of interest: 3 or fewer days of hospice care. The second model included this primary independent variable and was adjusted for baseline major depressive disorder. The third model was fully adjusted for all potential confounders ascertained. Covariates were retained in the multivariate model if their association with major depressive disorder was statistically significant ($p < 0.05$). In general, the removed covariates not retained in the full model did not change the parameter estimate on hospice use by more than 10%, a reasonable threshold for variable selection (20), and all had p values greater than 0.15.

Results

Caregiver Characteristics and Depression

The characteristics of the 174 caregivers studied are summarized in Table 1. At the baseline interview, the current prevalence of major depressive disorder was 25.9% among the caregivers; the current prevalence was 11.5% at the follow-up interview. The current prevalence of major depressive disorder at baseline did not significantly differ between the caregivers of patients with hospice enrollments of 3 days or fewer and the caregivers of patients with longer hospice enrollments (31.0% and 24.8%, respectively) ($\chi^2 = 0.43$, $df = 1$, $p = 0.51$).

Length of Hospice Enrollment

Days of hospice enrollment varied substantially, with 16.7% ($N = 29$) of the patients receiving 3 days or fewer of hospice care (Table 2). The mean number of days enrolled in a hospice was 34.7 ($SD = 65.3$), although the number of hospice enrollment days varied significantly by type of hospice care received. Those receiving inpatient hospice care ($N = 115$) averaged only 14.6 days of care, and those receiving both home and inpatient hospice care ($N = 59$) averaged 73.9 days of care ($t = 4.59$, $df = 60$, $p < 0.001$). The fewest days of hospice care received among the subgroup that received home hospice care was 5; all of the patients who had 3 or fewer days of hospice care received only inpatient hospice care, hence justifying the subgroup analysis reported. None of the sociodemographic, caregiver burden, or self-rated health measures was associated with the length of hospice enrollment. The patients who had been hospitalized before enrollment, however, were more likely to receive hospice care for 3 or fewer days (22.4% versus 9.3%) ($\chi^2 = 4.21$, $df = 1$, $p = 0.04$). Also, the timing of prognosis discussions and caregiver understanding of prognosis differed by hospice length of enrollment. Caregivers of pa-

TABLE 2. Prevalence of Major Depressive Disorder in 174 Caregivers of Patients With Terminal Cancer, by Days of Hospice Enrollment Before Patient Death

Days of Hospice Care	Major Depressive Disorder at Baseline		Major Depressive Disorder at 6-Month Follow-Up	
	N	%	N	%
Total				
≤3 ($N = 29$)	9 ^a	31.0	7 ^b	24.1
≥4 ($N = 145$)	36 ^a	24.8	13 ^b	9.0
Subgroups of >3 days				
4–7 ($N = 29$)	9	31.0	3	10.3
8–14 ($N = 30$)	7	23.3	1	3.3
15–30 ($N = 32$)	6	18.8	2	6.3
31–60 ($N = 30$)	9	30.0	4	13.3
61–90 ($N = 12$)	2	16.7	2	16.7
≥91 ($N = 12$)	3	25.0	1	8.3

^a Nonsignificant difference in number of days ($\chi^2 = 0.43$, $df = 1$, $p = 0.51$).

^b Significant difference in number of days ($\chi^2 = 5.47$, $df = 1$, $p = 0.02$).

tients with 3 or fewer hospice days compared to those of patients with longer enrollment periods reported that a physician first told them that the illness was incurable 8.1 versus 26.4 weeks before enrollment ($t = 2.99$, $df = 109$, $p = 0.003$), that the physician's prognosis was shorter when discussed (18.7 versus 33.9 weeks) ($t = 2.04$, $df = 39.9$, $p = 0.04$), and that they as caregivers recognized that the illness could not be cured 15.3 versus 59.6 weeks before enrollment ($t = 2.50$, $df = 155$, $p = 0.01$).

Days of Hospice Enrollment and Depression

The caregivers of patients enrolled with a hospice within 3 or fewer days of their death were significantly more likely to have major depressive disorder at the follow-up interview than the caregivers of patients who enrolled with a hospice earlier in the course of their terminal illness, with a prevalence rate of major depressive disorder at follow-up of 24.1% and 9.0%, respectively (unadjusted odds ratio = 3.23, 95% confidence interval [CI] = 1.16–8.99) (Table 3, model 1). This association remained after we adjusted for major depressive disorder at baseline (adjusted odds ratio = 3.37, 95% CI = 1.08–10.53) (Table 3, model 2) and after further adjustment for all significant covariates, including caregiver sociodemographic characteristics and chronic conditions (fully adjusted odds ratio = 4.35, 95% CI = 1.13–16.75) (Table 3, model 3). The results of models using the number of chronic conditions reported at follow-up did not differ materially from the model presented, which includes chronic conditions reported at baseline.

Short Hospice Enrollment and Depression

Because the number of days of hospice care varied significantly by whether the patient enrolled in home hospice as well as inpatient hospice, we repeated the analyses for the subgroup of caregivers of patients who received inpatient hospice care only ($N = 115$). The results (available from the first author) were similar to those for the full group, although the effects of having fewer than 3 days of hospice care on caregiver major depressive disorder at follow-up

TABLE 3. Associations Between Hospice Enrollment of 3 Days or Less Before Patient's Death and Caregiver Major Depressive Disorder at Follow-Up in 174 Caregivers of Patients With Terminal Cancer

Variable	Logistic Regression Model					
	Model 1		Model 2		Model 3 ^a	
	Odds Ratio	95% CI	Odds Ratio	95% CI	Odds Ratio	95% CI
≤3 days in hospice	3.23	1.16–8.99	3.37	1.08–10.53	4.35	1.13–16.75
Caregiver major depressive disorder at baseline	—	—	9.43	3.27–27.14	11.95	3.14–45.53
Caregiver is female	—	—	—	—	22.25	1.81–273.62
Caregiver's age is ≤65 years	—	—	—	—	20.00	2.27–200.00
Caregiver is spouse	—	—	—	—	5.33	1.11–25.46
Education is at least high school	—	—	—	—	8.99	1.57–51.64
Number of chronic conditions at baseline	—	—	—	—	2.08	1.33–3.23

^a Nonsignificant covariates removed from the model included religiousness, annual income, caregiver burden, caregiver gratification, duration of caregiving, type of assistance provided for activity of daily living or instrumental activity of daily living, number of caregiver activities restricted because of caregiving, caregiver's contact with friends and family at baseline or follow-up, availability of instrumental or emotional support for the caregiver at baseline or follow-up, whether the caregiver interview took place before or just after the death of the patient, use of hospital care before hospice enrollment, type of hospice services used, use of bereavement services, timing of physician's discussion of prognosis, expected prognosis, and timing of caregiver recognizing illness as terminal.

were slightly stronger than those found in the full study group. In addition, we conducted subgroup analyses for the caregivers whose baseline interview was conducted before the patient's death and the caregivers whose baseline interview was after the death of the patient. The rates of major depressive disorder at baseline and at follow-up as well as the association between hospice length of enrollment and major depressive disorder at follow-up were similar between the two subgroups.

Discussion

We found that a substantial proportion of patients (about 17%) enrolled with a hospice only 3 or fewer days before their death. The sizable proportion of patients with such short hospice enrollments is particularly striking because all the patients in the study had the primary diagnosis of terminal cancer, a disease with a more predictable trajectory than other common causes of death. These results are consistent with previous studies (4–6); however, we found an even higher proportion of patients with short hospice enrollments before death than in previous studies of Medicare beneficiaries (4). This may be because our group included younger, non-Medicare patients and because lengths of hospice enrollment have been declining in the last decade (6).

Caregivers of patients with few days of hospice care were at an increased risk of subsequent major depressive disorder, a debilitating and costly disease for both individual sufferers and society. In our study of 174 caregivers, 24.1% of the caregivers of patients with 3 or fewer hospice days met diagnostic criteria for major depressive disorder compared to 9.0% of the caregivers of patients with longer hospice lengths of enrollment. Some patients with major depressive disorder reflected nonrecovery from major depression at the time of enrollment; others reflected new cases of major depressive disorder during the months after the death.

The reasons for the association between length of hospice enrollment and subsequent caregiver depression are not clear. One interpretation might be that caregivers who

have major depressive disorder and/or do not accept the terminal illness of the patient delay hospice enrollment. Their subsequent major depressive disorder 6–8 months after the death might therefore be due to their baseline major depressive disorder or other factors that delayed the hospice enrollment decision. However, in this study, major depressive disorder at baseline was not associated with length of hospice enrollment. Furthermore, the significant association between shorter hospice enrollments and postloss major depressive disorder persisted after we controlled for caregiver major depressive disorder at baseline and was unaffected by other correlates of hospice enrollment length, such as hospitalization before hospice enrollment, the timing of physicians' prognostic discussions, or caregiver beliefs about prognosis.

Alternatively, many of the hospice services directed at preparing the family for the impending death, such as counseling, alleviation of pain, and spiritual care, may be abridged in cases of extremely short enrollments, such as 2 or 3 days. Research on bereavement and depression has identified a lack of preparation for death as a risk factor for postloss depression (21), and if fewer days of hospice care is related to inadequate preparation for death, then shorter hospice enrollment might be a risk factor for elevated caregiver depression during bereavement.

The results of this article should be interpreted in light of several considerations. First, our study group was drawn from a single site, which might limit its generalizability; however, the prevalence of preloss and postloss major depressive disorder found among this group is consistent with other studies of caregivers of patients receiving hospice care (22) and their bereavement adjustment (23). Second, because our patient selection was from a hospice with a large inpatient component, we had a preponderance of patients who used inpatient care only. Although this is not typical in the United States, it allowed us to study in more depth the phenomenon of late hospice enrollment, which is quite common among the many patients who die in inpatient hospices annually (24). Third, we studied only caregivers of patients with cancer. This

was in part to control for the different prognostication abilities among patients with other diseases and because of the high prevalence of cancer among hospice users. However, our results may have differed for caregivers of patients with other diseases. Fourth, because these data were observational and not the results of a randomized controlled trial, we must refrain from inferring that the observed associations were causal. Finally, we assessed only major depressive disorder and not other psychiatric disorders, so we were unable to examine the influence of hospice length of enrollment on a variety of other, and potentially comorbid, conditions (e.g., anxiety and/or substance abuse disorders).

Previous studies have suggested multiple reasons that patients may receive hospice late in the course of illness. These include the imprecision of prognostication (4, 5, 25–27), the patients' resistance to being labeled as dying (28) and foregoing curative care (3), the physicians' reluctance to initiate advance-care planning (29) and to discuss the prognosis frankly (3, 30, 31), reimbursement systems that separate palliative from curative care (28, 32), and increased scrutiny of hospices' and physicians' compliance with the 6-month prognosis requirement (3, 32).

These challenges to earlier hospice enrollment are substantial. However, our findings help illuminate some of the consequences for caregivers of not addressing these potential barriers to earlier hospice enrollment when appropriate. Earlier hospice enrollment may help reduce the risk of major depressive disorder during the first 6–8 months of bereavement. Furthermore, those whose loved one dies within the first days of hospice enrollment might be a target group for bereavement interventions to alleviate the risk of subsequent major depressive disorder.

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References

- Bradley EH, Fried TR, Kasl SV, Cicchetti DV, Johnson-Hurzel R, Horwitz SM: Referral of terminally ill patients for hospice: frequency and correlates. *J Palliat Care* 2000; 16:20–26
- Berry DE, Boughton L, McNamee F: Patient and physician characteristics affecting the choice of home based hospice, acute care inpatient hospice facility, or hospitals as last site of care for patients with cancer of the lung. *Hosp J* 1994; 9:21–38
- Institute of Medicine: *Approaching Death: Improving Care at the End of Life*. Washington, DC, National Academy Press, 1997
- Christakis NA, Escarce JJ: Survival of Medicare patients after enrollment in hospice programs. *N Engl J Med* 1996; 335:172–178
- Lamont EB, Christakis NA: Physician factors in the timing of cancer patient referral to hospice palliative care. *Cancer* 2002; 94:2733–2737
- Medicare: *More Beneficiaries Use Hospice but for Fewer Days of Care*. Washington, DC, United States General Accounting Office, 2000
- Allard P, Dionne A, Potvin D: Factors associated with length of survival among 1,081 terminally ill cancer patients. *J Palliat Care* 1995; 11:20–24
- Bruera E, Miller MJ, Kuehn N, MacEachern T, Hanson J: Estimate of survival of patients admitted to a palliative care unit: a prospective study. *J Pain Symptom Manage* 1992; 7:82–86
- Godkin MA, Krant MJ, Doster NJ: The impact of hospice care on families. *Int J Psychiatry Med* 1983; 13:153–165
- Greer DS, Mor V, Morris JN, Sherwood S, Kidder D, Birnbaum H: An alternative in terminal care: results of the National Hospice Study. *J Chronic Dis* 1986; 39:9–26
- Seale C: A comparison of hospice and conventional care. *Soc Sci Med* 1991; 32:147–152
- Kane RL, Klein SJ, Bernstein L, Rothenberg R, Wales J: Hospice role in alleviating the emotional stress of terminal patients and their families. *Med Care* 1985; 23:189–197
- Barzilai LP: Evaluation of a home based hospice. *J Fam Pract* 1981; 12:241–245
- Ransford HE, Smith ML: Grief resolution among the bereaved in hospice and hospital wards. *Soc Sci Med* 1991; 32:295–304
- First MB, Spitzer RL, Gibbon M, Williams JBW: *Structured Clinical Interview for DSM-IV Axis I Disorders, Patient Edition (SCID-P), version 2*. New York, New York State Psychiatric Institute, Biometrics Research, 1996
- Williams JBW, Gibbon M, First MB, Spitzer RL, Davies M, Borus J, Howes MJ, Kane J, Pope HG, Rounsaville B, Wittchen H-U: The Structured Clinical Interview for DSM-III-R (SCID), II: multi-site test-retest reliability. *Arch Gen Psychiatry* 1992; 49:630–636
- Bedard M, Molloy DW, Squire L, Dubois S, Lever JA, O'Donnell M: The Zarit Burden Interview: a new short version and screening version. *Gerontologist* 2001; 41:652–657
- Lawton MP, Brody EM: Assessment of older people: self-maintaining and instrumental activities of daily living. *Gerontologist* 1969; 9:179–186
- Katz S, Downs TD, Cash HR, Grotz RC: Progress in development of the index of ADL. *Gerontologist* 1970; 10:20–30
- Greenland S: Modeling and variable selection in epidemiologic analysis. *Am J Public Health* 1989; 79:340–349
- Barry LC, Kasl SV, Prigerson HG: Psychiatric disorders among bereaved persons: the role of perceived circumstances of death and preparedness for death. *Am J Geriatr Psychiatry* 2002; 10:447–457
- Haley WE, LaMonde LA, Han B, Narramore S, Schonwetter R: Family caregiving in hospice: effects on psychological and health functioning among spousal caregivers of hospice patients with lung cancer or dementia. *Hosp J* 2001; 15:1–18
- Silverman GK, Johnson JG, Prigerson HG: Preliminary explorations of the effects of prior trauma and loss on risk for psychiatric disorders in recently widowed people. *Isr J Psychiatry Relat Sci* 2001; 38:202–215
- National Hospice and Palliative Care Organization: *Facts and Figures*. <http://www.nhpco.org>

25. Fox E, Landrum-McNiff K, Zhong Z, Dawson NV, Wu AW, Lynn J (SUPPORT [Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments] Investigators): Evaluation of prognostic criteria for determining hospice eligibility in patients with advanced lung, heart, or liver disease. *JAMA* 1999; 282:1638–1645
26. Christakis NA, Iwashyna TJ: Impact of individual and market factors on the timing of initiation of hospice terminal care. *Med Care* 2000; 38:528–541
27. Christakis NA, Lamont EB: Extent and determinants of error in doctors' prognoses in terminally ill patients: prospective cohort study. *BMJ* 2000; 320:469–472
28. Lynn J: Perspectives on care at the close of life: serving patients who may die soon and their families: the role of hospice and other services. *JAMA* 2001; 285:925–932
29. Martin DK, Emanuel LL, Singer PA: Planning for the end of life. *Lancet* 2000; 356:1672–1676
30. Bradley EH, Hallemeier AG, Fried TR, Johnson-Hurzeler R, Cherlin EJ, Kasl SV, Horwitz SM: Documentation of discussions about prognosis with terminally ill patients. *Am J Med* 2001; 111: 218–223
31. Emanuel EJ: Care for dying patients. *Lancet* 1997; 349:1714
32. Huskamp HA, Buntin MB, Wang V, Newhouse JP: Providing care at the end of life: do Medicare rules impede good care? *Health Aff (Millwood)* 2001; 20:204–211