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Caring for Grieving Family Members: Results from a National Hospice Survey

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Abstract

Background—A founding principle of hospice is that the patient and family is the unit of care; however, we lack national information on services to family members. Although Medicare certification requires bereavement services be provided, reimbursement rates are not tied to the level or quality of care; therefore, limited financial incentives exist for hospice to provide more than a minimal benefit.

Objectives—To assess the scope and intensity of services provided to family members by hospice.

Research Design—We fielded a national survey of hospices between September 2008 and November 2009.

Participants—A national sample of U.S. hospices with an 84 percent response rate (N=591).

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Measures—Bereavement services to the family, bereavement services to the community, labor-intensive family services and comprehensive family services.

Results—Most hospices provided bereavement services to the family (78%) and to the community (76%), but only a minority of hospices provided labor-intensive (23%) or comprehensive (27%) services to grieving family members. Larger hospice size was positively and significantly associated with each of the four measures of family services. We found no significant difference in provision of bereavement services to the family, labor-intensive services or comprehensive services by ownership type; however, non-profit hospices were more likely than for-profit hospices to provide bereavement services to the community.

Conclusions—Our results demonstrate substantial diversity in the scope and intensity of services provided to families of patients with terminal illnesses, suggesting a need for clearer guidance on what hospices should provide to exemplify best practices. Consensus within the field on more precise guidelines in this area is essential.

One of the fundamental guiding principles of hospice is that the patient and family is the unit of care,[1] reflecting the critical importance of including surviving family in the care of people with terminal illnesses. Consistent with this principle, services for family members, both before and following the patient's death, are recognized as core components of high quality palliative care.[2] This holistic model of caring for grieving family members dates back to the historical roots of the hospice movement in the United Kingdom, and was adopted by American hospices.[3,4] Medicare, the primary payer of hospice care in the U.S., defines bereavement counseling as emotional, psychosocial, and spiritual support and services provided before and after the death of the patient to assist with issues related to grief, loss and adjustment.[5] Centers for Medicare & Medicaid Services (CMS) (2010) specifically require hospices to provide an initial and ongoing bereavement assessment of the needs of the patient's family members and these assessments must be incorporated into the plan of care (§418.54(c)(7)). In addition, hospices must have an organized program established to provide bereavement services to family members for up to a year following the patient's death (§418.64(d)).[6] Evidence indicates that supportive services for grieving families can improve their post-loss adjustment,[7,8,9] particularly if provided soon after a loss[7] and to those at risk for prolonged or complicated grief.[10,11,12,13,8]

Despite the importance of serving families, we know little about the scope and intensity of hospice services provided to family members. Although Medicare certified hospice programs are required to provide support to bereaved family members, services are not separately billable, and the specific services provided are left to the discretion of the hospice. Because Medicare reimbursement is not tied to the level or quality of services provided to family members, limited financial incentives exist to provide more than a minimal level of care. One prior study by Carlson (2007) examined caregiver support services provided by hospices and found that although 59% of hospices provided personal care services, only 13% provided homemaker/household services and 7% provided respite care.[14] A second study conducted with California hospices found substantial variation in the types of bereavement services provided.[15] However, both of these studies focus on only a subset of family services and used data from more than a decade ago. Thus, we have limited information on the degree to which hospices provide care to families and how hospices may differ in their provision of family services.

Accordingly, we conducted a national survey of hospices to better understand the scope and intensity of services provided to family members. We examined whether family services differed by hospice ownership status or by other organizational characteristics including: hospice chain affiliation, vertical integration with non-hospice health care facilities, age, region of the country, urbanicity, size (i.e., patients per day), patient-to-staff ratio, religious

affiliation, concern about losing market share to competitors, and proportion of revenue from Medicare. We hypothesized that non-profit hospices would provide a richer array of services compared with for-profit hospices given the strong historical commitment to family-based care as hospice first emerged (under almost exclusively not-for-profit auspices) in the 1970s. Prior research indicated that hospice ownership affects length of stay, patient diagnosis, and other important outcomes,[16,17,18] but no information is currently available on how ownership affects the scope of care provided to family members.

In addition to the research on ownership, prior research has indicated that hospice organizational capacity including size, chain affiliation, years providing hospice care, nd share of revenue from Medicare are associated with hospice enrollment and disenrollment practices.[19,20,21] Thus, we hypothesized that the organizational capacity of the hospice might be associated with available resources for providing services to family members. To test these hypotheses, we examined whether larger hospices, chain hospices, vertically integrated hospices, hospices with lower patient-to-staff ratios, older hospices and hospices in urban areas were more likely to provide comprehensive services to family member. Alternatively, financial constraints might prompt some hospices to provide a minimum level of bereavement care. Those with a smaller share of revenue from Medicare may provide fewer services to family members, in an effort to conserve scarce resources. In addition, we expected that religiously affiliated hospices might be predisposed toward providing more comprehensive bereavement services for families due to their greater emphasis on spirituality in the face of death. In prior work, researchers have speculated that religious affiliation might be associated with quality of care differences.[22] Finally, we hypothesized that hospices reporting a concern about losing market share would provide more services to families. Findings from this study may be important to highlight key gaps in family services.

DATA & METHODS

Data

We conducted a cross-sectional study in which we surveyed a random national sample of hospices from September 2008 to November 2009. Using the 2006 Center for Medicare and Medicaid Services Provider of Services (POS) file as our sample frame (N=3,036 active hospices), we randomly sampled 775 hospices. The majority of hospices operating in the U.S. (93 percent) are certified to provide services under the Medicare hospice benefit.[23] As of 2006, we estimated from the Medicare POS file that 18 percent of hospices had been operating for 2 years or less. To ensure that our sample had approximately 18 percent of hospices in operation for 2 years or less, we randomly sampled 139 (0.18*775) newly operating hospices from the 2008 Medicare POS file. Of the total 914 hospices selected, 208 were no longer providing hospice care or had closed their facility. Introductory emails were sent to the 706 hospices that remained eligible to respond inviting their medical directors to participate, and a follow up email included a link to the web-based survey. Hospices that did not respond to the initial contact received multiple telephone and email reminders. Medical directors were directed to identify the hospice staff members best able to complete different sections of survey (e.g., financial, nursing-related, counseling-related). Section respondents were almost exclusively members of the hospice leadership team including hospice administrators and directors of nursing, operations, and outreach. The response rate was 84 percent (N=591 hospices).

Measures

To develop measures of family services provided, we reviewed the National Quality Forum (NQF) preferred practices (2006) and the existing literature on family care services, including bereavement support, in hospice.[24] For example, the NQF described the

formulation, utilization, and regular review of a timely care plan based on assessment of the preferences of both patients and family members, and the routine and ongoing assessment of grief and bereavement as critical to high quality hospice care. To supplement the published literature, we conducted semi-structured interviews with personnel at 16 hospice organizations to ascertain views about what services constituted high quality bereavement care. These organizations were purposefully chosen to achieve diversity geographically and along other hospice characteristics (i.e., ownership type, religious affiliation, size).

Outcomes—Our primary interest was in assessing the characteristics of hospices associated with providing a broad array of services to family members. On the basis information collected through interviews, we constructed 4 binary outcome measures to capture: 1) provision of bereavement services to the family; 2) provision of bereavement services to the community; 3) provision of labor-intensive family services, and 4) provision of comprehensive family services. First, we defined bereavement services to the family as providing at least 8 out of the 10 specific bereavement services included in the survey. We also conducted sensitivity analyses defining this outcome to include 9 of 10 and all 10 specific bereavement services. The 10 services were telephone calls to bereaved family members, sending a letter or a card at the time of death or anniversary of death, sending brochures and other educational materials dealing with grief, home visits by hospice staff or volunteers, having staff or volunteers attend funerals and/or wakes, providing memorial ceremonies, support groups or workshops, pre-death planning, individual therapy, and group therapy for family members. Second, we defined family services to the community as providing serving to families of dying patients not served by the hospice. Third, we defined labor-intensive family services to include providing screening for both clinical depression and complicated grief at initial patient admission, routinely during the patient's stay, and at the time of the patient's death, as well as providing the more labor-intensive bereavement services from the list above: support groups, workshops, group therapy and individual therapy. Fourth, we defined comprehensive family services as providing the most extensive array of services targeted at family members including: discussing family preferences for care at patient's initial admission, on a routine schedule, and as clinical conditions change; screening for clinical depression and complicated grief at initial patient admission, routinely during the patient's stay, and at the time of the patient's death; and providing at least 8 of 10 specific bereavement services to families.

Independent Variables—We identified factors that might affect the scope of family services providing. Hospice characteristics of interest included ownership (i.e., for-profit, non-profit) chain affiliation (i.e., whether or not a hospice was owned by a corporation that also owns other hospices), vertical-integration (i.e., whether or not a hospice was owned by a corporation that also owns non-hospice health care facilities such as hospitals or nursing homes), hospice age (i.e., whether or not the hospice had provided care more than 5 years), region (i.e., Northeast, South, Midwest, West), urbanicity (i.e., urban, suburban, and rural, as defined by the U.S. Department of Agriculture's 2003 Urban Influence Codes),[25] hospice size measured as patients per day by quartile, patient-to-hospice staff ratio by quartile, whether or not a hospice had a religious affiliation, a hospice's reported concern about losing market share to competitors (i.e., very concerned, somewhat concerned, slightly or not at all concerned) and whether or not a hospice's annual Medicare revenue is above the median proportion observed for all Medicare-certified hospices in our sample (85 percent). We note that modeling hospice age, hospice size, hospice patient-hospice staff ratio and percent revenue from Medicare as categorical (versus continuous) did not materially change the statistical significance of these variables.

Data Analysis

We estimated the proportion of hospices providing each of 4 outcomes: bereavement services to the family, bereavement services to the community, labor-intensive family services, and comprehensive family services. We examined bivariate associations between each outcome and hospice characteristics (i.e., ownership type, chain affiliation, vertical integration, hospice age, region, urbanicity, hospice size, patient-to-hospice staff ratio, religious affiliation, reported concern about losing market share and percent of its annual revenue from Medicare). Next, we estimated 4 multivariable logistic regression models to test hypotheses related to the adjusted associations between hospice characteristics and our outcomes.

RESULTS

Hospice sample characteristics

As indicated in Table 1, the sample (n=591 hospices) was evenly split between for-profit (48 percent) and non-profit (48 percent) hospices as expected given national rates by ownership.[26] Although the overall response rate for the survey was 84 percent, there was a differential response rate by hospice ownership status with an 89% response rate for **not-for-profit** hospices and a 79% response rate for for-profit hospices. Twenty-four percent were vertically integrated, i.e., owned by a corporation that owned other types of health care facilities; 14 percent were a member of a hospice chain. About three-quarters of hospices (74 percent) had been providing care for more than 5 years. One quarter of hospices had fewer than 20 patients per day on average, 26 percent had 20 to 49 patients per day, 26 percent had 50 to 100 patients per day, and 21 percent had more than 100 patients per day. Hospices had an average of 1.93 patients per full-time staff member (excluding volunteers), with the lowest quartile of hospices having 1.18 or fewer patients per staff member and the highest quartile of hospices having 2.18 or more patients per staff member. A plurality of hospices were located in the South (43 percent), most had no religious affiliation (89 percent), and about half (49 percent) received more than 85 percent of their annual revenue from Medicare. Seventy-nine percent of hospices reported being “very concerned” or “somewhat concerned” about losing market share to competitors, with the remainder reporting being only slightly concerned or not concerned at all (3 hospices did not report a level of concern).

Bereavement Services to the Family

The range and types of bereavement services providing to families varied substantially across hospices (Table 2). The most common service, provided by 98 percent of hospices, was telephone calls to follow up with bereaved family members. The least common service, provided by 51 percent of hospices, was group bereavement therapy. The majority of hospices (78 percent) reported providing at least 8 of the 10 bereavement services listed in the survey. However, a much lower share, 33 percent, provided all 10 bereavement services. In multivariable analysis presented in Table 3, we found that larger hospices were more likely than smaller hospices to provide 8 of 10 bereavement services, and this effect was consistent across the size distribution. That is, compared with the smallest hospices (those with fewer than 20 patients per day), hospices that cared for an average of 100 or more patients per day, 50-99 patients per day, or 20-49 patients per day all had significantly greater odds of providing bereavement services to families. Ownership and other hospice characteristics were not significantly associated with providing these bereavement services to family members. Results were qualitatively similar in sensitivity analyses estimating how hospice characteristics were associated with provision of 9 of 10 bereavement services or with the provision of all 10 bereavement services.

Bereavement Services to the Community

Three-quarters of hospices provided services to families in their service area who had not had a patient at their hospice (Table 2). As above, we found that larger hospice size was significantly and positively associated with a hospice providing bereavement services to the community. In addition, for-profit compared with nonprofit hospices had significantly lower odds (odds ratio (OR) 0.53; 95% confidence interval (CI) 0.30-0.94) of providing bereavement services to families in the community.

Labor-Intensive Family Services

Only 23 percent of hospices provided all services to family members that we defined as labor-intensive (Table 2). Fifty-two percent provided screening for major clinical depression, and 55% provided families screening for complicated or prolonged grief at the time of the patient's initial admission, routinely during the patient's stay, and at the time of the patient's death. Forty-two percent of hospices provided all labor-intensive bereavement counseling services including support groups/workshops, individual therapy and group therapy. Results in Table 3 indicate that hospice size was associated with the likelihood that hospices providing labor-intensive family services, but ownership and other hospice characteristics were not associated with the provision of these services.

Comprehensive Family Services

About one quarter of hospices (27 percent) provided comprehensive services to family members (Table 2). One component of comprehensive care was the inclusion of family preferences for the care received by patients. Almost half of all hospices (46 percent) discussed family members' preferences for the patient's care at multiple time points including at the time of initial admission, on a routine schedule after admission, and as the patient's clinical conditions change. As shown in Table 3**,** we found that hospices with more than 100 patients per day and those with 50 to 99 patients per day were significantly more likely than the hospices with fewer than 20 patients per day to provided comprehensive family services. Adjusting for profit status and other covariates, we found that hospices providing care for less than 5 years were more likely to provide comprehensive family services compared with older hospices. We found no significant associations between providing comprehensive family services and the following: ownership or other aspects of corporate structure, region, urbanicity, patient-to-staff ratio, religious affiliation, concern about market share, and annual Medicare revenue.

DISCUSSION

In this national survey of U.S. hospices, we found that 27% provided comprehensive services to family members. Hospice size was positively associated with the scope of services provided, adjusted for other hospice characteristics. We found no difference in provision of bereavement services to the family, labor intensive-services, or comprehensive services by ownership type; however, non-profit hospices were more likely than for-profit hospices to provide bereavement services to the community. Hospices in operation for fewer than five years were more likely than older hospices to provide comprehensive services. We found that other organizational factors including corporate structure, patient-to-staff ratio and religious affiliation did not significantly affect these outcomes. We also identified some substantial gaps in the care provided to families of patients using hospice. For example, our finding that only slightly more than half of U.S. hospices screen grieving family members at regular intervals is worrisome given the substantial evidence that untreated depression and complicated grief among bereaved family members can have negative consequences on long-term wellbeing.[27,28,29,30,31] Overall, the diversity of offerings suggests a need for clearer guidance on what constitutes recommended and highest quality family services. It is

difficult to assess how the variation in services provided affect family support because national preferred practices have only recently been developed for palliative care,[2] and guidelines including those related to bereavement care lack specificity. For example, while the National Consensus Project guidelines emphasize the importance of making bereavement services available to families, no recommendations are offered on how to match grieving family members to different types of services (e.g., group therapy, individual therapy, support groups) based of assessment of needs. Consensus within the field on more precise guidelines in this area is essential.

As national recommendations of best practices in hospice family services are established, it will be critical to consider both non-financial and financial incentives that may encourage hospices to implement guideline-based services. As noted above, CMS currently provides minimal guidance to hospices regarding how to structure bereavement programs and what types of services to offer.[6] Community benefits requirements for non-profit hospices create some incentive to provide services to community.[32] Such inducements are lacking on the for-profit side, and this may explain the ownership difference identified in the provision of bereavement services to the community.

Non-financial incentives to encourage the provision of high quality family support in hospice might include the development of a national quality measurement and reporting mechanism. In addition, financial incentives might include changes to the Medicare hospice per diem payment system. Medicare is increasingly moving toward value-based purchasing, most recently for hospital services under provisions of the Patient Protection and Affordable Care Act (ACA) scheduled to take effect in 2013. Value-based purchasing, which links payment more directly to the quality of care provided, aims to transform payment policy to reward providers for efficiently delivering high quality care. It is expected that CMS may begin testing value-based purchasing programs for hospice providers by 2016. As best practices are developed, family services may be an important area to consider targeting with value-based purchasing incentives. Our results suggest that such initiatives may particularly advantage larger hospices, which appear to have the organizational capacity for providing more comprehensive bereavement services.

This is the first national survey of U.S. hospices to report on the scope and intensity of services provided to family members. Given our high survey response rate, our findings are broadly generalizable. Another strength of our approach is the breadth of the measures collected on the types of family care services provided by hospices. Nevertheless, there are a number of limitations with this study worth noting. First, the data are self-reported, and hospices may have over-reported certain features of family care services. Given the low level of hospices that reported providing labor-intensive and comprehensive services to family members however, it does not appear that substantial over-reporting of services occurred. Second, because this survey was cross-sectional, we are unable to identify how hospice provision of services to family members has changed over time. Last, we do not have data on family satisfaction rates or longer-term functioning to examine how hospice family services might influence family outcomes. Additional research is needed to assess whether families of patients cared for by hospices that provide more comprehensive family care are more satisfied and better able to cope with their loss over time. Our results suggest the need for clearer guidance on best practices for meeting the needs of grieving family members in hospice. As a new medical subspecialty, the field of hospice and palliative medicine requires the same types of well-defined preferred practices as other medical specialties. Once these standards are established, reporting requirements and financial incentives should be considered to encourage hospices to provide the highest quality care to grieving family members at this difficult juncture in their lives.

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REFERENCES

1. Smith DH, Granbois JA. The American way of hospice. Hastings Cent Rep. Apr; 1982 12(2):8–10. [PubMed: 7096066]
2. National Consensus Project for Quality Palliative Care. Clinical Practice Guidelines for Quality Palliative Care. Second Edition. National Consensus Project for Quality Palliative Care; Pittsburgh, PA: 2009.
3. Kissan D, Lichtenthal WG, Zaider T. Family Care Before and After Bereavement. Omega. 2007; 56(1):21–32. [PubMed: 18051017]
4. Connor SR. Development of Hospice and Palliative Care in the United States. Omega. 2007; 56(1): 89–99. [PubMed: 18051022]
5. U.S. Department of Health and Human Services. Centers for Medicare and Medicaid Services. Medicare and Medicaid Programs: Hospice Conditions of Participation: Final Rule. Jun 5. 2008
6. Centers for Medicare and Medicaid Services (CMS). State Operations Manual. Appendix M – Guidance to Surveyors: Hospice. Rev. Dec 15.2010 69 https://www.cms.gov/manuals/downloads/som107ap_m_hospice.pdf.
7. Allumbaugh DL, Hoyt WT. Effectiveness of Grief Therapy: A Meta-Analysis. J Couns Psychol. 1999; 46(3):370–380.
8. Schut H, Stroebe MS. Interventions to Enhance Adaptation to Bereavement. J Palliat Med. 2005; 8(suppl 1):S140–S147. [PubMed: 16499462]
9. Forte AL, Hill M, Pazder R, et al. Bereavement care interventions: a systematic review. BMC Palliat Care. 2004; 3(1):3. [PubMed: 15274744]
10. Jordan JR, Neimeyer RA. Does Grief Counseling Work? Death Stud. 2003; 27:765–786. [PubMed: 14577426]
11. Schultz R, Hebert R, Boerner K. Bereavement after Caregiving. Geriatrics. 2008; 63(1):20–22.
12. Schut, H.; Stroebe, MS.; Van Den Bout, J., et al. The Efficacy of Bereavement Interventions: Determining Who Benefits. In: Stroebe, MS.; Hansson, RO.; Stroeb, W., et al., editors. Handbook of Bereavement Research: Consequences, Coping and Care. American Psychological Association; Washington, DC: 2001. p. 705-737.
13. Zhang B, El-Jawahri A, Prigerson HG. Update on bereavement research: evidence-based guidelines for the diagnosis and treatment of complicated bereavement. Journal of Palliative Medicine. 2006; 9(5):1188–1203. [PubMed: 17040157]
14. Carlson MD, Morrison RS, Holford TR, et al. Hospice Care: What Services Do Patients and Their Families Receive? Health Serv Res. 2007; 42(4):1672–1690. [PubMed: 17610443]
15. Foliart DE, Clausen M, SIljestrom C. Bereavement practices among California hospices: results of a statewide survey. Death Stud. Jul-Aug;2001 25(5):461–7. [PubMed: 11806414]
16. Carlson MD, Gallow WT, Bradley EH. Ownership Status and Patterns of care in Hospice: Results from the National Home and Hospice Care Survey. Medical Care. 2004; 42(5):432–8. [PubMed: 15083103]
17. Lindrooth RC, Weisbrod BA. Do Religious Nonprofit and For-profit Organizations Respond Differently to Financial Incentives? The Hospice Industry. Journal of Health Economics. 2007; 26(2):342–357. [PubMed: 17097173]
18. Wachterman MW, Marcantonio ER, Davis RB, McCarthy EP. Association of Hospice Agency Profit Status with Patient Diagnosis, Location of Care and Length of Stay. Journal of the American Medical Association. 2011; 305(5):472–479. 2011. [PubMed: 21285424]
19. Kirby EG, Keefe MJ, Nicols KM. A Study of the Effects of Innovative and Efficient Practices on Performance of Hospice Care Organizations. Health Care Management Review. 2007; 32(4):352–359. [PubMed: 18075444]

20. Carlson MDA, Herrin J, Du Q, Epstein AJ, Cherlin E, Morrison RS, Bradley EH. Hospice Characteristics and Disenrollment of Patients with Cancer. Health Services Research. 2009; 44(6) Epub 2004-21.
21. Lorenz KA, Asch SM, Rosenfeld KE, Lui MS Hui, Ettner SL. Hospice Admission Practices: Where Does Hospice Fit in the Continuum of Care? Journal of the American Geriatrics Society. 2004; 52(5):725–730. [PubMed: 15086652]
22. Mitchell SL, Tello JM, Roy J, Kabumoto G, Mor V. Clinical and Organizational Factors Associated with Feeding Tube Use Among Nursing Home Residents With Advanced Cognitive Impairment. JAMA. 2003; 290:73–80. 2003. [PubMed: 12837714]
23. National Hospice and Palliative Care Organization. 2010.
24. National Quality Forum. National Framework and Preferred Practices for Palliative and Hospice Care Quality: A Consensus Report. 2006.
25. U.S. Department of Agriculture, Economic Research Service. [Accessed January 12, 2011] Urban Influence Codes. 2003. Available at: http://www.ers.usda.gov/Briefing/Rurality/UrbanInf/
26. National Hospice and Palliative Care Organization. NHPCO Facts and Figures: Hospice Care In America. National Hospice and Palliative Care Organization; Alexandria, VA: 2010.
27. Prigerson HG, Bierhals AJ, Kasl SV, et al. Tramautic Grief as a Risk Factor for Mental and Physical Morbidity. Am J Psychiatry. 1997; 154(5):616–623. [PubMed: 9137115]
28. Silverman GK, Jacobs SC, Kasl SV, et al. Quality of life impairments associated with diagnostic criteria for traumatic grief. Psychol Med. 2000; 30(4):857–862. [PubMed: 11037094]
29. Ott CH. The impact of complicated grief on mental and physical health at various points in the bereavement process. Death Stud. 2003; 27(3):249–272. [PubMed: 12703505]
30. Boelen PA, Prigerson HG. The influence of symptoms of prolonged grief disorder, depression and anxiety on quality of life among bereaved adults. Eur Arch Psychiatry Clin Neurosci. 2007; 257:444–452. [PubMed: 17629728]
31. Stroebe MS, Schut H, Stroebe W. Health outcomes of bereavement. Lancet. Dec 8; 2007 370(9603):1960–73. [PubMed: 18068517]
32. Schlesinger M, Mitchell S, Gray B. Public expectations of nonprofit and for-profit ownership in American medicine: Clarifications and implications. Health Affairs. 2004; 23(6):181–191. [PubMed: 15537597]

Table 1

Characteristics of a National Sample of Hospices, 2008-09 (N=591)

Variable	
Ownership Type	%
For-profit hospices	48.22
Non-profit hospices	47.88
Government hospices	3.38
Other/Missing	0.51
Corporate structure	
Hospice is vertically integrated	24.20
Hospice is a member of a chain	14.38
Age	
Hospice has provided care for less than 5 years	26.40
Size	
Fewer than 20 patients per day	24.87
20-49 patients per day	26.05
50-99 patients per day	25.71
100 or more patients per day	21.48
Hospice did not report number of patients per day	1.86
Region	
Northeast	11.51
South	43.82
Midwest	27.24
West	17.43
Location	
Rural	16.07
Suburban	14.89
Urban	69.04
Patient/staff ratio	
Fewer than 1.18 patients per hospice employee	24.36
1.18-1.65 patients per hospice employee	24.19
1.65-2.18 patients per hospice employee	24.19
2.18 or more patients per hospice employee	24.53
Hospice did not report number of patients per day or total number of employees	2.70
Religious affiliation	

Variable	
Hospice has religious affiliation	11.05
Hospice concern over losing market share to competitors	
Very concerned	43.48
Somewhat concerned	35.53
Slightly or not at all concerned	20.47
Hospice did not report level of concern	0.50
Percentage of revenue from Medicare[1]	
Hospice receives more than 85 percent of annual revenue from Medicare	48.64

[1] Statistic excludes 40 hospices that did not provide percentage of annual revenue from Medicare (N=551).

Table 2

Proportion of Hospices Providing Services to Family Members (N=591)

Variable	
Bereavement services to family	%
Hospice offers telephone calls to bereaved family members	97.80
Hospice sends letter/card at time of death or anniversary of death	97.80
Hospice sends brochures and other educational materials dealing with grief	94.25
Hospice offers home visits by hospice staff or volunteers	93.23
Hospice staff or volunteers attend funerals and/or wakes	92.72
Hospice provides memorial ceremonies	87.99
Hospice offers support groups or workshops	79.36
Hospice offers pre-death planning	77.66
Hospice provides individual therapy	71.07
Hospice provides group therapy	50.93
Hospice provides at least eight of ten listed bereavement services	*77.66*
Hospice provides at least nine of ten listed bereavement services	*56.68*
Hospice provides all ten listed bereavement services	*32.83*
Bereavement services to community	
Hospice provides bereavement services to families of patients not served by hospice	76.14
Labor-intensive family services	
Hospice screens caregivers for major clinical depression at patient's initial admission, routinely during the patient's stay, and at the patient's time of death	52.34
Hospice screens caregivers for complicated or prolonged grief at patient's initial admission, routinely during the patient's stay, and at the patient's time of death	55.12
Hospice provides labor-intensive bereavement counseling services to the family (i.e., support groups or workshops, individual therapy and group therapy)	41.96
Hospice provides all labor-intensive family services	*23.01*
Comprehensive family services	
Hospice discusses family preferences for care at patient's initial admission, on a routine schedule, and as clinical conditions change	45.63
Hospice screens caregivers for major clinical depression at patient's initial admission, routinely during the patient's stay, and at the patient's time of death (see above)	
Hospice screens caregivers for complicated or prolonged grief at patient's initial admission, routinely during the patient's stay, and at the patient's time of death (see above)	
Hospice provides 8 of 10 bereavement services to the family (see above)	
Hospice provides all comprehensive family services	*27.07*

Table 3

Adjusted Outcomes Measuring Provision of Services to Family Members (N= 526)[1]

	Bereavement services to family		Bereavement services to community		Labor-intensive family services		Comprehensive family services	
	Adjusted Odds Ratio	**95% Confidence Interval**	**Adjusted Odds Ratio**	**95% Confidence Interval**	**Adjusted Odds Ratio**	**95% Confidence Interval**	**Adjusted Odds Ratio**	**95% Confidence Interval**
Ownership type[2]								
Nonprofit status	1.00		1.00		1.00		1.00	
For-profit status	0.67	0.37 - 1.19	0.53	0.30 - 0.94*	1.03	0.60 - 1.77	1.15	0.69 - 1.92
Corporate Structure								
No chain membership	1.00		1.00		1.00		1.00	
Chain membership	1.37	0.58 - 3.21	1.01	0.46 - 2.24	1.03	0.52 - 2.04	1.70	0.88 - 3.29
No vertical integration	1.00		1.00		1.00		1.00	
Vertical integration	1.30	0.69 - 2.48	1.37	0.71 - 2.62	1.25	0.71 - 2.21	0.92	0.53 - 1.61
Age								
Provides care for 5 or more years	1.00		1.00		1.00		1.00	
Provides care for fewer than 5 years	1.00	0.56 - 1.78	0.79	0.47 - 1.34	1.43	0.81 - 2.52	1.82	1.07 - 3.08*
Size								
Fewer than 20 patients/day	1.00		1.00		1.00		1.00	
20-49 patients/day	2.19	1.17 - 4.11*	2.64	1.41 - 4.97**	2.19	1.03 - 4.68*	1.72	0.87 - 3.37
50-99 patients/day	3.19	1.55 - 6.60**	4.42	2.17 - 8.99**	3.23	1.47 - 7.08**	2.79	1.39 - 5.59**
100 or more patients/day	4.22	1.87 - 9.49**	5.78	2.52 - 13.28**	5.35	2.37 - 12.08**	3.48	1.66 - 7.26**
Region								

	Bereavement services to family		Bereavement services to community		Labor-intensive family services		Comprehensive family services	
	Adjusted Odds Ratio	95% Confidence Interval	Adjusted Odds Ratio	95% Confidence Interval	Adjusted Odds Ratio	95% Confidence Interval	Adjusted Odds Ratio	95% Confidence Interval
Northeast	1.00		1.00		1.00		1.00	
Midwest	0.96	0.46 - 2.02	1.42	0.63 - 3.19	1.20	0.54 - 2.69	0.77	0.37 - 1.63
South	2.02	0.92 - 4.43	0.86	0.39 - 1.89	1.76	0.81 - 3.82	1.13	0.56 - 2.28
West	1.47	0.64 - 3.41	1.12	0.47 - 2.65	1.47	0.63 - 3.45	1.01	0.46 - 2.19
Location								
Rural	1.00		1.00		1.00		1.00	
Suburban	1.54	0.71 - 3.33	1.16	0.55 - 2.46	0.78	0.32 - 1.92	0.58	0.26 - 1.31
Urban	1.54	0.80 - 2.97	1.45	0.76 - 2.77	1.02	0.49 - 2.14	0.74	0.38 - 1.44
Patient/hospice staff ratio								
Fewer than 1.18 patients/employee	1.00		1.00		1.00		1.00	
1.18-1.65 patients/employee	0.96	0.49 - 1.82	1.76	0.89 - 3.49	0.80	0.41 - 1.54	1.19	0.65 - 2.18
1.65-2.18 patients/employee	1.22	0.61 - 2.45	1.15	0.58 - 2.28	0.68	0.34 - 1.36	0.59	0.30 - 1.14
2.18 or more patients/employee	0.92	0.45 - 1.87	0.70	0.35 - 1.39	0.73	0.37 - 1.46	0.73	0.38 - 1.41
Religious affiliation								
No religious affiliation	1.00		1.00		1.00		1.00	
Religious affiliation	0.85	0.40 - 1.83	0.84	0.37 - 1.88	1.15	0.57 - 2.30	0.97	0.49 - 1.93
Hospice's concern over losing market share to competitors								
Very concerned	1.00		1.00		1.00		1.00	
Somewhat concerned	1.43	0.86 - 2.36	0.90	0.54 - 1.47	0.94	0.59 - 1.50	1.23	0.78 - 1.94
Slightly or not at all concerned	1.70	0.88 - 3.28	0.84	0.46 - 1.54	0.58	0.31 - 1.09	1.08	0.61 - 1.89
Percentage of annual revenue from Medicare								

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	Bereavement services to family		Bereavement services to community		Labor-intensive family services		Comprehensive family services	
	Adjusted Odds Ratio	95% Confidence Interval	Adjusted Odds Ratio	95% Confidence Interval	Adjusted Odds Ratio	95% Confidence Interval	Adjusted Odds Ratio	95% Confidence Interval
Up to 85 percent from Medicare	1.00		1.00		1.00		1.00	
More than 85 percent from Medicare	0.90	0.57 - 1.43	1.14	0.73 - 1.80	1.26	0.81 - 1.94	0.89	0.59 - 1.34

*significant at p<.05;

**significant at p<.01

[1]Regressions omit 65 observations with missing data for one or more variables.

[2]Omitted hospices include hospices owned by government (N=20) and hospices that listed multiple ownership types or failed to list an ownership type (N=3).