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# US Hospice Industry Experienced Considerable Turbulence From Changes In Ownership, Growth, And Shift To For-Profit Status

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## Abstract

The US hospice industry, which provides palliative and supportive care to patients with terminal illness, has undergone substantial changes during the last decade. The magnitude of these changes has not been fully captured in previous studies or reports. In this longitudinal study of hospices active in Medicare during 1999–2009, we analyzed Provider of Services files to understand key shifts in the industry. We found evidence of substantial turbulence. One-fifth of Medicare-certified hospices active in 1999 had closed or withdrawn from the program by 2009, and more than 40 percent had experienced one or more changes in ownership. The most prominent trend was the shift in ownership type from nonprofit to for-profit ownership. Four out of five Medicare-certified hospices that entered the marketplace between 2000 and 2009 were for-profit. Hospices also became larger, as the proportion with 100 or more full-time employees doubled to 5 percent from 1999 to 2009. Although each of the Census regions had more hospices in 2009 than in 1999, the geographic distribution of hospices in the country changed, with proportionally more in the South and West. The impact of all of these changes on cost and quality of hospice care, as well as patient access, remains a critical area for future research.

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The US hospice industry, which provides palliative and supportive care to patients with terminal illness, has experienced enormous changes since Congress first authorized a hospice benefit as part of Medicare in 1983. In that year, forty hospices became certified to provide care under Medicare; only 10 percent of these were for-profit organizations.[1] By 2010 the Medicare Payment Advisory Commission estimated that there were 3,555 Medicare-certified hospices in the United States, and more than half were for-profit institutions.[2]

Researchers have expressed concern that Medicare's reimbursement system for hospice care may distort patterns of enrollment and use. Medicare reimburses hospice providers on a flat per diem basis, although the first and last days in hospice are typically higher-intensity and higher-cost than other days.[3-6] As a result, per diem hospice reimbursement may unintentionally encourage longer enrollment periods, when a patient has a longer period of lower-intensity, lower-cost care—days that may be more profitable for providers than the first and last days.

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Many patients are enrolled in hospice for only a short period of time before their death. On an annual basis between 2000 and 2010, 25 percent of Medicare beneficiaries enrolled in hospice received hospice care for five days or less. During the same time period, however, the average length of hospice enrollment for the 10 percent of Medicare beneficiaries with the longest enrollment periods increased by nearly 60 percent, from 141 days to 240 days.[2]

An analysis of hospices in one state found no difference in average lengths-of-stay between for-profit and nonprofit hospices.[7] However, a more recent national study found evidence that for-profit hospices are much less likely to enroll patients whose predicted lengths-of-stay are shorter and less profitable, and more likely to admit patients with longer predicted lengths-of-stay, such as patients with dementia or other noncancer diagnoses.[8] Longer average lengths-of-stay, along with an increase in the number of patients using hospice services, have been identified as primary drivers of the increase in annual Medicare hospice spending, which rose from $2.9 billion in 2000 to $13 billion in 2010.[2]

Previous studies have suggested that nonprofit and for-profit hospices differ in how they provide care. One study found that patients of for-profit hospices received a much narrower range of hospice services than patients of nonprofit hospices, in an adjusted analysis.[9] Another study found that for-profit hospices were less likely than nonprofit hospices to offer palliative radiation, which is aimed at relieving pain and symptoms of disease and not intended to cure disease.[10]

Data on hospice staffing ratios has shown that for-profit hospices employ lower proportions of more highly qualified staff, such as registered nurses and medical social workers, than do nonprofit hospices.[11] Other studies have demonstrated that nonprofit hospices are more likely than for-profit hospices to provide certain bereavement services, such as support groups and workshops for families.[12]

Despite the magnitude of the overall changes within the US hospice industry during the last decade, previous reports have not fully characterized how the industry has changed, particularly in terms of hospice ownership, affiliation, age, and size. Nor have any studies examined the frequency with which hospices have opened, closed, or stopped participating in Medicare. Accordingly, we sought to analyze key shifts in the hospice industry, using data from the Provider of Services data files from the Centers for Medicare and Medicaid Services (CMS).

Given that previous research has indicated that for-profit ownership and size may be associated with both the quality and cost of hospice care, understanding the nature of changes in the industry's structure may have important implications for the quality and cost of care at the end of life.[8-13]

## Study Data And Methods

### STUDY DESIGN AND SAMPLE

We conducted a longitudinal analysis using annual panel data from CMS's Provider of Services files from 1999 to 2009. These files are updated quarterly and include each Medicare-certified hospice, identified by a unique Provider of Services number.

Our sample consisted of hospices that were active participants in Medicare in 1999 ($n$ =2, 256) and those that began participating in Medicare between 2000 and 2009 ($n$ =1, 710), for a total sample of 3,966 hospices. These numbers are quite similar to those used by the Medicare Payment Advisory Commission in its reports to Congress on changes within the hospice industry. The commission obtains its numbers from a different source, the CMS

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Providing Data Quickly system, which is available only to government employees. Relying on this information, the commission reported that there were 3,492 active hospices in 2009,[2] whereas we identified 3,364 using the Provider of Services files.

## DATA AND MEASURES

Using longitudinal, linked Provider of Services data, we identified each hospice as belonging to one of the following categories: active in the Medicare program without a change of ownership type in 1999–2009; active in the program with a change of ownership type in the period, such as from nonprofit to for-profit, or from private for-profit to incorporated for-profit; closed, meaning that the hospice stopped providing services during 1999–2009; and otherwise terminated, meaning that the hospice stopped participating in the Medicare program during 1999–2009 but may have continued providing services to patients.

For each hospice, we also recorded a series of characteristics. These included ownership (non-profit, for-profit, government, and other); size, measured by the number of full-time-equivalent employees; years since first certified by Medicare; geographic census region; location (urban, suburban, or rural area); and affiliation (with a hospital, skilled nursing facility, home health agency, or none).

We obtained hospice locations through the Urban Influence Codes developed by the Department of Agriculture, a system that uses data from the 2000 census to classify counties into one of twelve groups based on their population and their proximity to metropolitan areas.[14] We combined these twelve groups into three—urban, suburban, and rural—based on their proximity to a metropolitan area, using the methods of previous researchers.[15]

## DATA ANALYSIS

We recorded a change in ownership type each time a hospice moved from one Provider of Services ownership category (for-profit, nonprofit, government, or other) to another. To determine whether ownership changes as recorded in the Provider of Services files were consistent and not the result of errors in the data, we examined ownership status one year before and one year after each available year of ownership data. Out of our total sample of 3,966 hospices, only 0.9 percent changed ownership twice within three years. This proportion is small enough to suggest that the ownership changes we recorded—most of which lasted several years or until the end of the study period—were valid and not the result of coding errors.

We performed a similar analysis with the variable representing operating status and identified 11 hospices in our sample of 3,966 that appeared to end and then resume participation in Medicare between 1999 and 2009. We dropped these hospices from our analyses.

We took a number of additional steps to make sure that we were not overcounting hospices. For example, we compared the addresses of newly certified hospices to the addresses of existing hospices from the previous year to see if a hospice had ended its participation in Medicare under its original provider number and continued to offer services under a new provider number. We found no evidence of this having occurred.

We also examined the cross-reference provider number. Of the 3,966 hospices in our original sample, 45 had cross-reference provider numbers in 2009. We compared these identifiers to the original Provider of Services numbers that we had used to merge the individual data sets. We found twenty cross-reference provider numbers that matched the provider numbers assigned to other hospices. We omitted these hospices from our analysis

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to avoid the possibility that they represented the same organizations operating under different provider numbers.

With the omission of eleven hospices with multiple operating statuses between 1999 and 2009 and twenty hospices with matching cross-reference provider numbers, our final sample contained 3,935 hospices.

Because nearly 90 percent of hospice patient days are paid for by Medicare,[16] we considered both hospices that stopped participating in Medicare and those that were listed as permanently closed to have exited the marketplace. We tracked these changes both on a year-to-year basis and cumulatively between 1999 and 2009.

### LIMITATIONS

Our findings should be interpreted in the light of some limitations. In this descriptive analysis, we were unable to examine how the changes we studied might influence patient outcomes or costs.

In addition, we may have underestimated the level of organizational turbulence in the hospice industry, because we may not have detected acquisitions that occurred within an ownership type (such as when one corporate hospice group acquires another) or among organizations within one Medicare provider number. Nevertheless, we believe that our data describe the large majority of shifts in the industry over the decade.

## Study Results

### CHANGES IN CHARACTERISTICS, 1999–2009

In 1999 there were 2,225 hospices in the United States, and 62 percent of them were nonprofits (Exhibit 1). Sixty-five percent were located in urban areas. Most hospices were small, with 75 percent reporting that they had fewer than twenty full-time-equivalent employees. Forty percent of facilities were freestanding—that is, they had no affiliation. Another 34 percent were affiliated with home health agencies, while 25 percent were affiliated with a hospital. Only 1 percent had an affiliation with a skilled nursing facility.

The East North Central census region, comprising Illinois, Indiana, Michigan, Ohio, and Wisconsin, had the largest share of hospices active in 1999—16 percent (Exhibit 2). New England had the smallest.

The hospices that opened in the period 2000–09 differed greatly from those that were already active in 1999. Of the 1,710 hospices that began participating in Medicare between 2000 and 2009, 80 percent were for-profit (Exhibit 1). Seventy-four percent were located in urban areas, and 92 percent were small, at least in their first year of Medicare participation.

Eighty-five percent of the new hospices were freestanding (Exhibit 1). Twenty-eight percent were located in the West South Central census region, consisting of Arkansas, Louisiana, Oklahoma, and Texas (Exhibit 2).

The characteristics of all hospices active in 2009 reflected the substantial changes of the previous decade. The proportion of nonprofit hospices had declined by nearly half since 1999, from 62 percent to 35 percent (Exhibit 1). The percentage of government hospices also decreased, from 9 percent to 5 percent, while the proportion of other hospices grew, from 2 percent to 8 percent (data not shown).

The share of for-profit hospices nearly doubled, increasing to 52 percent in 2009 (Exhibit 1). The distribution of hospices among urban, suburban, and rural areas remained largely

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unchanged between 1999 and 2009, although there was a slight decrease in the share of institutions located in suburban and rural areas. The proportion of hospices in the New England, Middle Atlantic, East and West North Central, and Pacific regions decreased between 1999 and 2009 (Exhibit 2). In contrast, the proportion in the West South Central region increased, from 13 percent in 1999 to 19 percent in 2009.

Between 1999 and 2009 hospices also became larger. More than one-fifth of hospices active in 2009 had 20–49 full-time employees, and the proportion of hospices with 100 or more full-time employees doubled from 1999, reaching 5 percent in 2009 (Exhibit 1). In addition, the share of hospices affiliated with hospitals and home health agencies declined, while that of freestanding hospices increased from 40 percent in 1999 to 67 percent in 2009.

Hospices' involvement with the Medicare program as of 2009 was longer than it was as of 1999. Six percent of the hospices that were active in 1999 reported having participated in Medicare for fifteen or more years (Exhibit 1). In 2009, 37 percent of active hospices had participated for that length of time.

## CLOSURES AND OWNERSHIP CHANGES, 1999–2009

There were considerable changes in hospice ownership type and operating status over the decade 1999–2009. As shown in Exhibit 3, 350 hospices (16 percent of those active in 1999) closed, and an additional 86 (4 percent of those active in 1999) terminated their Medicare participation.

Of the 1,789 hospices that operated continuously between 1999 and 2009, 792 (44 percent) changed ownership type one or more times (Exhibit 3). Some of these changes were between ownership categories—such as a nonprofit becoming a for-profit institution. However, there was also a major amount of change within categories, such as a church-affiliated nonprofit becoming a private nonprofit. As noted above, the facts that the majority of hospices that changed ownership type did so just once within three years during 1999–2009 and maintained their new ownership type suggests that these changes are real, and not the result of coding errors.

There were important differences between the hospices that closed or terminated their Medicare participation during 1999–2009 and those that remained open and in the program. The results of unadjusted and multivariable analysis are presented in the online Technical Appendix.[17]

In multivariable analysis, similar to unadjusted analysis, for-profit hospices active in 1999 were significantly less likely than nonprofits to still be active in 2009, while hospices in the East and West South Central and Pacific census regions were less likely than those in New England to still be active. Hospices in rural areas were significantly more likely to remain active in 2009 than those located in urban areas. Hospices that employed 20–49 full-time-equivalent employees in 1999 were more likely to be active in 2009 than those with fewer employees, although size was not a significant predictor of 2009 activity for larger institutions. And hospices that had been Medicare-certified for five or more years in 1999 were significantly more likely to be active in 2009 than those that had been certified for fewer than five years in 1999.

In multivariable analysis that included facility type, the same characteristics in 1999—for-profit ownership, location in the East and West South Central and Pacific Census regions, rural location, number of full-time-equivalent employees, and length of participation in Medicare—were significantly correlated with an active status in 2009. Compared with

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freestanding hospices, those affiliated with a skilled nursing facility or a home health agency in 1999 were significantly less likely to be active in 2009.

## Discussion

### MAJOR CHANGES BETWEEN 1999 AND 2009

We documented substantial turbulence in the hospice industry between 1999 and 2009. One-fifth of hospices active in 1999 closed or terminated their participation in the Medicare program in the following ten years. Of those that remained active during the decade, 44 percent changed ownership type. This trend of shifting ownership type, which was generally from nonprofit to for-profit ownership (Exhibit 1), was the most prominent sign of the upheaval in the industry.

The fact that the majority of hospices that began participating in Medicare after 1999 were for-profit was a primary driver of the shift in the proportions of for-profit and nonprofit hospices. In multivariable analysis, having fewer full-time-equivalent employees, as well as being newer, for-profit, and located in the East and West South Central or Pacific census regions or in an urban area were significant predictors of hospice closure or termination. The many small, for-profit, and freestanding hospices that began participating in Medicare during 2000–09 shared many of the characteristics of those hospices that closed or terminated during the same time period.

These findings illustrate the tremendous changes that have occurred within the hospice industry during the past decade. New hospices were more likely to be for-profit organizations, but existing for-profit hospices were more likely than nonprofits to close or stop participating in Medicare.

Although each of the regions we examined had more active hospices in 2009 than in 1999, the proportion of hospices in each region changed. In 2009 the New England, Middle Atlantic, East and West North Central, and Pacific census regions had a smaller share of the nation’s hospices than in 1999, while states in the South Atlantic and East and West South Central and Mountain regions had a larger share (Exhibit 2).

Overall, the number of hospices affiliated with hospitals or skilled nursing facilities barely changed between 1999 and 2009 (Exhibit 1). The number of freestanding hospices, however, increased by nearly 250 percent during the same time period.

### IMPLICATIONS FOR PATIENTS

There are several implications of these changes for the care of hospice patients and their families. Although our study does not link the increase in the number of for-profit hospices to increased hospice spending by Medicare, the Medicare Payment Advisory Commission’s most recent report recommends a number of changes to the hospice reimbursement system, including payments that more closely track the daily costs of providing hospice care.[2] The commission has also suggested that Congress require reviews of hospice facilities in which at least 40 percent of patients were enrolled for more than 180 days.[2]

We documented a number of other changes in hospice ownership type between 1999 and 2009. Some of them, such as changes from one type of nonprofit ownership to another, may have had little impact on patient care. Other, more fundamental changes—such as a change from nonprofit to for-profit status, or government to other ownership—may indicate more meaningful changes in hospice operation.

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Evidence suggests that hospice services and processes of care may differ between for-profit and nonprofit hospices.[9-12] Additional research is needed to determine whether the type of hospice providing care has a substantive impact on the experience of patients enrolled in hospice and their families.

The trend toward an increase in hospice size, as measured by the average number of employees over time, may have positive implications for patient care. Previous studies have found that hospices serving more than a hundred patients per day were more likely than those serving fewer than 100 patients per day to have implemented all of the patient- and family-centered preferred practices endorsed by the National Quality Forum,[13] and more likely to provide more comprehensive types of bereavement services to patients' families.[18] Larger hospices were also more likely than smaller ones to offer labor-intensive types of bereavement services, such as screening family members for clinical depression or complicated grief—a long-lasting form of grief that may worsen rather than ease over time. They may also offer services such as group or individual therapy and bereavement services in the community.[18]

## Conclusion

We found a sizable increase in the proportion of for-profit hospices, as well as a noticeable increase in hospice size as indicated by the average number of employees. Much of this growth, both in the share of hospices that are for-profit and in hospice size, has occurred in southern and western states.

Additional research is needed to investigate how the expansion of hospice in these geographic areas has affected patients' access to hospice care. Finally, the evidence of turbulence in the hospice industry—for example, institutions' changes of ownership type, closures, and withdrawal from Medicare—deserves additional study.

The impact of all of these changes on the cost and quality of hospice care, as well as patients' access to it, is unknown at this point and remains a critical area for future research.

## Acknowledgments

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## Biographies

**Jennifer W. Thompson** is a manager in the Department of Population Medicine, Harvard Pilgrim Health Care Institute.

In this month's *Health Affairs*, Jennifer Thompson and colleagues report on their study of changes in the hospice industry during 1999–2009, in which they found that much turbulence had occurred. One-fifth of Medicare-certified hospices active in 1999 had closed

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or withdrawn from the program by 2009, and more than one-third had experienced one or more changes in ownership. The most prominent trends were the shift in ownership type from nonprofit to for-profit, and a change in geographic distribution that added proportionally more hospices in the South and West. More research is needed to discern the impact, the authors write.

Thompson is a manager in the Department of Population Medicine, Harvard Pilgrim Health Care Institute. Her research interests include access to primary and preventive health care, particularly in low-resource settings; health care quality and outcomes; and the evolution of the US hospice industry. Previously, she researched Medicaid and Children's Health Insurance Program enrollment policies and coverage options under Medicare Part D as a research associate at the Georgetown Health Policy Institute. Thompson has a master's degree in public policy, with an emphasis in health policy, from Georgetown University.

**Melissa D.A. Carlson** is an assistant professor of geriatrics and palliative medicine at the Mount Sinai School of Medicine.

Melissa Carlson is assistant professor of geriatrics and palliative medicine at the Mount Sinai School of Medicine. Her research is concerned with the quality of and access to health care services for patients with serious illnesses, identifying gaps in hospice care and highlighting strategies to improve service quality, based on insights from high-performing hospices. She has also evaluated the impact of hospice care on caregivers of the terminally ill.

Carlson is the recipient of a Brookdale Leadership in Aging Fellowship and a National Institutes of Health Career Development Award. She has a master's degree in business administration from New York University and a doctoral degree in health services research, with an emphasis on health economics, health policy, and statistical methods, from Yale University.

**Elizabeth H. Bradley** is a professor of public health at Yale University.

Elizabeth Bradley is a professor of public health at Yale University, director of the Yale Global Health Initiative, and faculty director of the Yale Global Health Leadership Institute. She researches organizational change and quality of care within hospitals, nursing homes,

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Bradley is a member of the World Economic Forum, Network of Global Agenda Councils, and AcademyHealth. She has a master's degree in business administration from the University of Chicago and holds a doctorate in health economics and health policy from Yale University.

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**EXHIBIT 1**

Characteristics Of US Hospice Organizations, 1999–2009

| | Active in 1999 (*n* = 2,225) | | New, 2000–09[a] (*n* = 1,710) | | Active in 2009 (*n* = 3,342) | |
|---|---|---|---|---|---|---|
| **Characteristic** | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** |
| **OWNERSHIP** | | | | | | |
| All nonprofits | 1,381 | 62.1 | 215 | 12.6 | 1,161 | 34.8 |
| Religious | 166 | 7.4 | 25 | 1.5 | 113 | 3.4 |
| Private | 734 | 33.0 | 112 | 6.5 | 668 | 20.0 |
| Other | 481 | 21.6 | 78 | 4.6 | 380 | 11.4 |
| All for-profits | 610 | 27.4 | 1,371 | 80.2 | 1,741 | 52.1 |
| Independent | 19 | 0.8 | 52 | 3.0 | 53 | 1.6 |
| Partnership | 37 | 1.6 | 119 | 7.0 | 133 | 4.0 |
| Corporation | 499 | 22.4 | 955 | 55.8 | 1,300 | 38.9 |
| Other | 55 | 2.5 | 245 | 14.3 | 255 | 7.6 |
| Government/other | 234 | 10.5 | 124 | 7.2 | 440 | 13.2 |
| **LOCATION** | | | | | | |
| Urban | 1,442 | 64.8 | 1,271 | 74.3 | 2,311 | 69.1 |
| Suburban | 421 | 18.9 | 245 | 14.3 | 555 | 16.6 |
| Rural | 362 | 16.3 | 194 | 11.3 | 476 | 14.2 |
| **FULL-TIME EQUIVALENTS** | | | | | | |
| ≤19 | 1,668 | 75.0 | 1,573 | 92.0 | 2,154 | 64.4 |
| 20–49 | 382 | 17.2 | 120 | 7.0 | 726 | 21.7 |
| 50–99 | 120 | 5.4 | 12 | 0.7 | 292 | 8.7 |
| ≥100 | 55 | 2.5 | 4 | 0.2 | 170 | 5.1 |
| **YEARS OF MEDICARE PARTICIPATION[b]** | | | | | | |
| 0–4 | 770 | 34.6 | __[c] | __[c] | 932 | 27.9 |
| 5–9 | 789 | 35.5 | __[c] | __[c] | 604 | 18.1 |
| 10–14 | 524 | 23.6 | __[c] | __[c] | 564 | 16.9 |
| ≥15 | 142 | 6.4 | __[c] | __[c] | 1,242 | 37.2 |

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| Characteristic | Active in 1999 (*n* = 2,225) Number | Percent | New, 2000–09[a] (*n* = 1,710) Number | Percent | Active in 2009 (*n* = 3,342) Number | Percent |
|---|---|---|---|---|---|---|
| **AFFILIATION** | | | | | | |
| Hospital | 554 | 24.9 | 69 | 4.0 | 526 | 15.7 |
| Skilled nursing facility | 22 | 1.0 | 10 | 0.6 | 20 | 0.6 |
| Home health agency | 755 | 33.9 | 179 | 10.5 | 570 | 17.1 |
| None (freestanding) | 894 | 40.2 | 1,452 | 84.9 | 2,226 | 66.6 |

**SOURCE** Authors' analysis of 1999–2009 Provider of Services files from the Centers for Medicare and Medicaid Services.

**NOTES** Hospices that closed or terminated their participation in Medicare between 1999 and 2009 and had reopened by 2009 (*n* =11) are excluded, as are hospices with cross-reference provider numbers that matched the provider numbers of other hospices (*n* =20). Not all percentages sum to 100 because of rounding. Full-time equivalents are the number of full-time equivalent hospice employees, excluding volunteers.

[a] Ownership, affiliation, full-time equivalents as of when hospice began participating in Medicare.

[b] For the hospices active in 1999, years of Medicare participation is the number of years of Medicare-certified operation as of 1999. For the hospices active in 2009, years of Medicare participation is the number of years of Medicare-certified operation as of 2009.

[c] Years of Medicare participation vary depending on the date in which the hospice began participating in Medicare.

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**EXHIBIT 2**

Regional Distribution Of US Hospices, 1999–2009

| | Active in 1999[a] | | New, 2000–09[a] | | Active in 2009[a] | |
|---|---|---|---|---|---|---|
| **Census region** | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** |
| New England | 115 | 5.2 | 56 | 3.3 | 159 | 4.8 |
| Middle Atlantic | 212 | 9.5 | 112 | 6.5 | 277 | 8.3 |
| East North Central | 362 | 16.3 | 163 | 9.5 | 455 | 13.6 |
| West North Central | 279 | 12.5 | 133 | 7.8 | 363 | 10.9 |
| South Atlantic | 316 | 14.2 | 231 | 13.5 | 480 | 14.4 |
| East South Central | 198 | 8.9 | 214 | 12.5 | 324 | 9.7 |
| West South Central | 299 | 13.4 | 475 | 27.8 | 641 | 19.2 |
| Mountain | 186 | 8.4 | 192 | 11.2 | 317 | 9.5 |
| Pacific | 258 | 11.6 | 134 | 7.8 | 326 | 9.7 |

**SOURCE** Authors' analysis of 1999–2009 Provider of Services files from the Centers for Medicare and Medicaid Services.

**NOTES** New England is CT, MA, ME, NH, RI, VT. Middle Atlantic is NJ, NY, and PA. East North Central is IL, IN, MI, OH, and WI. West North Central is IA, KS, MN, MO, ND, ND, and SD. South Atlantic is DC, DE, FL, GA, MD, NC, SC, VA, and WV. East South Central is AL, KY, MS, and TN. West South Central is AR, LA, OK, and TX. Mountain is AZ, CO, ID, MT, NM, NV, UT, and WY. Pacific is AK, CA, HI, OR, and WA.

[a]Sample sizes are available in Exhibit 1.

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**EXHIBIT 3**

Changes In Hospice Ownership Type And Operating Status, 1999–2009

| | Active, no ownership change ($n$ = 997) | | Active, ownership change ($n$ = 792) | | Closed by 2009 ($n$ = 350) | | Otherwise terminated by 2009 ($n$ = 86) | |
|---|---|---|---|---|---|---|---|---|
| **Characteristic** | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** | **Number** | **Percent** |
| **OWNERSHIP** | | | | | | | | |
| All nonprofits | 628 | 62.9 | 544 | 68.6 | 173 | 49.4 | 36 | 41.8 |
| Religious | 72 | 7.2 | 55 | 6.9 | 35 | 10.0 | 4 | 4.6 |
| Private | 392 | 39.3 | 245 | 30.9 | 75 | 21.4 | 22 | 25.6 |
| Other | 164 | 16.4 | 244 | 30.8 | 63 | 18.0 | 10 | 11.4 |
| All for-profits | 273 | 27.4 | 155 | 19.7 | 137 | 39.0 | 45 | 52.3 |
| Independent | 5 | 0.5 | 6 | 0.8 | 5 | 1.4 | 3 | 3.5 |
| Partnership | 8 | 0.8 | 15 | 1.9 | 9 | 2.5 | 5 | 5.8 |
| Corporation | 246 | 24.7 | 109 | 13.8 | 111 | 31.7 | 33 | 38.4 |
| Other | 14 | 1.4 | 25 | 3.2 | 12 | 3.4 | 4 | 4.6 |
| Government/other | 96 | 9.6 | 93 | 11.7 | 40 | 11.4 | 5 | 5.8 |
| **LOCATION** | | | | | | | | |
| Urban | 659 | 66.1 | 483 | 61.0 | 238 | 68.0 | 62 | 72.1 |
| Suburban | 171 | 17.1 | 170 | 21.5 | 66 | 18.9 | 14 | 16.3 |
| Rural | 167 | 16.7 | 139 | 17.5 | 46 | 13.1 | 10 | 11.6 |
| **FULL-TIME EQUIVALENTS** | | | | | | | | |
| ≤19 | 714 | 71.6 | 588 | 74.2 | 296 | 84.6 | 70 | 81.4 |
| 20–49 | 184 | 18.5 | 147 | 18.6 | 41 | 11.7 | 10 | 11.6 |
| 50–99 | 63 | 6.3 | 42 | 5.3 | 10 | 2.9 | 5 | 5.8 |
| ≥100 | 36 | 3.6 | 15 | 1.9 | 3 | 0.9 | 1 | 1.2 |
| **YEARS OF MEDICARE PARTICIPATION, 1999** | | | | | | | | |
| 0–4 | 310 | 31.1 | 235 | 29.7 | 173 | 49.4 | 52 | 60.5 |
| 5–9 | 361 | 36.2 | 287 | 36.2 | 121 | 34.6 | 20 | 23.3 |
| 10–14 | 254 | 25.5 | 217 | 27.4 | 41 | 11.7 | 12 | 13.9 |
| ≥15 | 72 | 7.2 | 53 | 6.7 | 15 | 4.3 | 2 | 2.3 |

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| Characteristic | Active, no ownership change (*n* = 997) | | Active, ownership change (*n* = 792) | | Closed by 2009 (*n* = 350) | | Otherwise terminated by 2009 (*n* = 86) | |
|---|---|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| **AFFILIATION** | | | | | | | | |
| Hospital | 234 | 23.5 | 228 | 28.8 | 83 | 23.7 | 9 | 10.5 |
| Skilled nursing facility | 8 | 0.8 | 5 | 0.6 | 6 | 1.7 | 3 | 3.5 |
| Home health agency | 332 | 33.3 | 263 | 33.2 | 137 | 39.1 | 23 | 26.7 |
| None (freestanding) | 423 | 42.4 | 296 | 37.4 | 124 | 35.4 | 51 | 59.3 |

**SOURCE** Authors' analysis of 1999–2009 Provider of Services files from the Centers for Medicare and Medicaid Services.

**NOTES** Not all percentages sum to 100 because of rounding. Full-time equivalents are the number of full-time equivalent hospice employees, excluding volunteers.