ONLINE APPENDIXES

2E

Hospice

ONLINE APPENDIX 2E-A

Hospice visit patterns

Hospice visit patterns

The Commission's prior analyses have shown that the structure of the current Medicare hospice payment system—generally a flat per diem payment over the course of an episode[1]—does not align well with hospices' higher levels of effort at the beginning and end of a hospice episode. In March 2009, the Commission recommended moving to a payment system in which the per diem payments for an episode of care begin at a relatively higher rate but then decline as the length of the episode increases, with an additional payment at the end of the episode, to reflect hospices' higher level of effort at the time of a patient's death. Since the Commission made this recommendation, additional data have become available on hospice visit patterns across episodes of care. Analyses of these data confirm our earlier findings that the number of hospice visits per week is higher early in a hospice episode and at the end of an episode near the time of a patient's death. These findings support the need for a payment system that is better aligned with the U-shaped pattern of hospice care.

Medicare claims data

Beginning July 1, 2008, hospices were required to report on their Medicare claims the number of visits provided each week by three disciplines of personnel: nurses, home health aides, and social workers.[2] This information is the first national patient-level data available on hospice visits to Medicare beneficiaries. Our analyses cover the first six months of Medicare claims data on hospice visits, July to December 2008, for patients who were admitted to hospice and discharged within the six-month period.

Patient-level data from a group of nonprofit hospices

The Commission has obtained proprietary patient-level data on hospice visits from a group of 17 nonprofit hospices.[3] It is a rich source of data on the frequency and length of visits provided by these hospices for a broad set of disciplines (nurses, home health aides, social workers, chaplains, therapists, physicians, volunteers, and others). The data cover the period from October 1, 2005, through September 30, 2008.

Hospice visit patterns by length of stay and diagnosis

Analysis of the two new data sources confirm our earlier findings (based on analysis of data from a large national hospice chain) that patients with short stays in hospice receive more visits per week on average than patients with long stays in hospice (Medicare Payment Advisory Commission 2006, Medicare Payment Advisory Commission 2008). These analyses show that hospice care tends to follow a U-shaped trajectory, where patients receive more visits at the beginning of an episode and at the end of an episode near the time of a patient's death and fewer visits in the intervening period. The data also reaffirm that length of stay rather than diagnosis is a more significant driver of the number of visits per week. Analysis of the mix of visits indicates that patients with shorter stays tend to receive more nurse visits and fewer home health aide visits than patients with longer stays. Finally, beneficiaries with shorter hospice stays appear to receive not only more visits but also longer visits, suggesting the importance of the visit time data that CMS will begin collecting in 2010.

Visits per week

Analysis of the Medicare claims data for the last half of 2008 confirm our prior findings that average visits per week decline as length of stay increase (Figure 2E-A1). In addition, patients with similar lengths of stay have generally similar numbers of visits per week on average across all diagnoses.

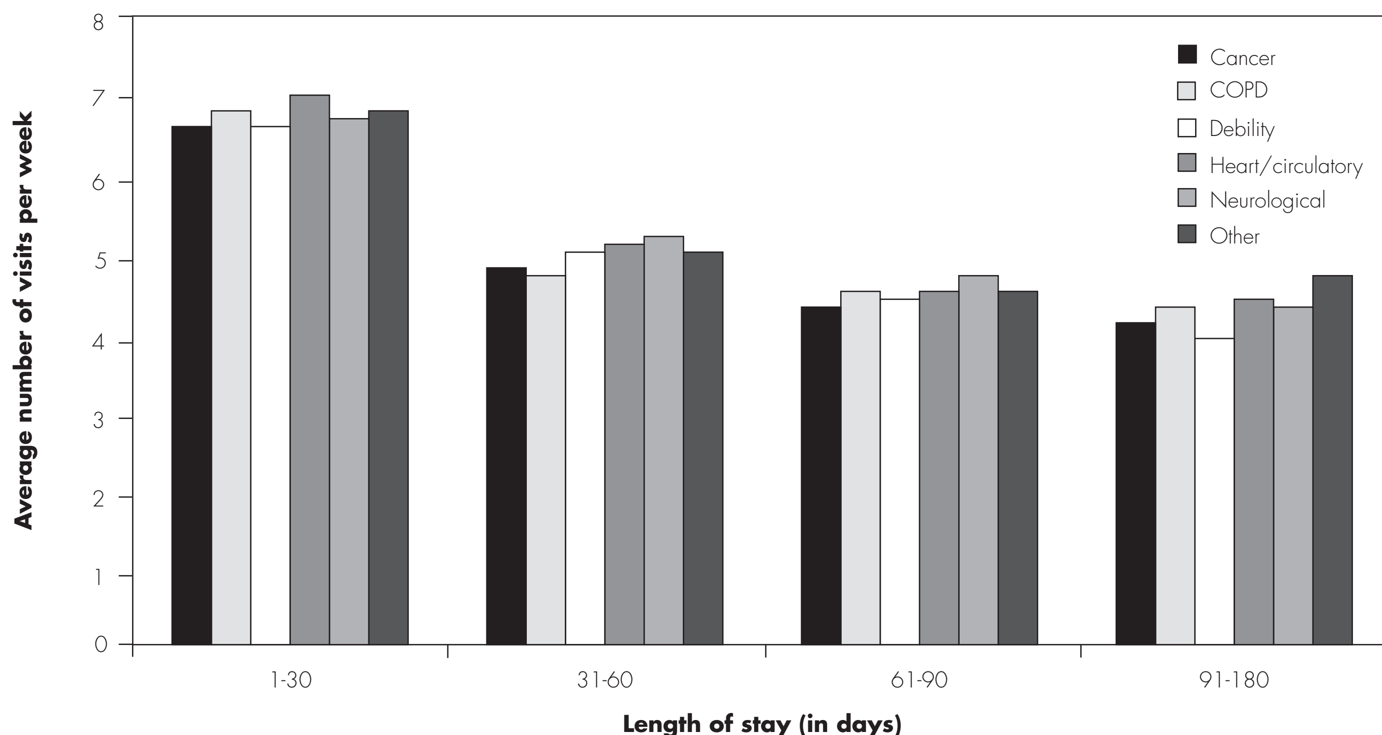
The higher average visits per week for patients with short stays compared with patients with long stays reflects in large part the higher visit frequency at the beginning of the episode and at the end of the episode near the time of the patient's death. Analysis of data from the 17 hospices demonstrates this U-shaped pattern of hospice care (Table 2E-A1). Across all length-of-stay categories, patients in the 17 hospices received more visits per week on average during the first and last 7 days of their hospice stay than in the intervening period, with the last 7 days of life being the time with the highest visit frequency. Not shown in the table, patients who were discharged from hospice alive (either because the patient decided to revoke the hospice election and return to conventional care or because the patient no longer met the hospice eligibility criteria) received fewer hospice visits per week in all portions of the episode than patients who were discharged deceased with a similar length of stay.

Visit hours per week

Another aspect of hospice visit patterns is the number of visit hours a patient receives. Like the average number

FIGURE 2E–A1

Hospice visits per week by length of stay and diagnosis, Medicare claims, July to December 2008



Note: COPD (chronic obstructive pulmonary disease). Data include only those beneficiaries who were admitted to and discharged from hospice between July 1, 2008, and December 31, 2008. The figure reflects routine home care and continuous home care visits received by patients who did not receive any hospice general inpatient care or inpatient respite care.

Source: MedPAC analysis of Medicare hospice 100 percent standard analytic file from CMS.

of visits per week, the average visit hours per week were higher for patients with short stays than for patients with long stays among the 17 hospices (Figure 2E-A2). However, when measuring visit intensity by hours rather than number of visits, we observe a somewhat sharper decline in visit intensity as patient length of stay increases, because patients with shorter stays not only receive more visits per week but also receive longer visits.

Similar to the pattern in number of visits, visit hours did not appear to vary substantially by diagnosis once length of stay was taken into account (Figure 2E-A3). However, small differences emerged. Within any length-of-stay category, cancer patients tended to receive slightly fewer visit hours per week than patients with other diagnoses on average.

Mix of visits

Both the Medicare claims data and the data from the 17 hospices indicate that the mix of visits varies by length of stay, with shorter stay patients receiving more nurse visits relative to home health aide visits than longer stay patients. For example, the Medicare claims data indicate that nurse visits accounted for 61 percent of visits received by beneficiaries with a length of stay of 30 days or less, compared with 44 percent of visits for beneficiaries with a length of stay of 91 to 180 days.

Both data sources also indicate that cancer patients have a slightly higher share of visits provided by nurses than patients with other diagnoses, after taking into account length of stay. For example, among patients with a length of stay of 90 to 180 days, the share of visits provided by a nurse ranged from 39 percent (neurology patients) to 51 percent (cancer patients), according to the claims data.

TABLE 2E–A1

Average routine home care visits per week by length of stay and portion of the episode for patients from 17 hospices

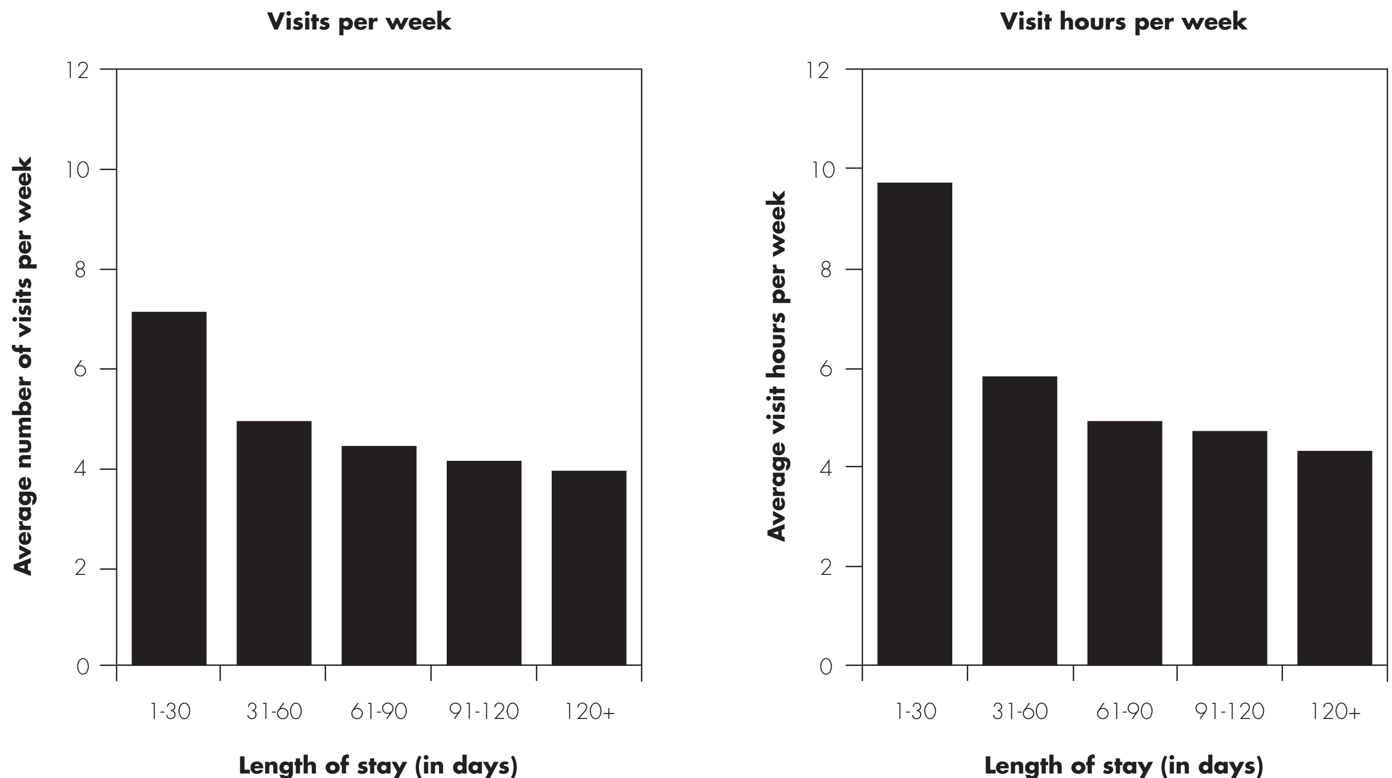
Length of stay (in days)	Average visits per week: First 7 days	Middle days	Last 7 days
1–7	10.1	N/A	10.1
8–14	7.2	N/A	7.4
15–30	6.2	5.0	6.8
31–60	5.6	4.3	6.7
61–90	5.5	4.0	6.6
91–120	5.5	3.8	6.4
121+	5.4	3.8	6.4

Note: N/A (not available). Data include only those Medicare beneficiaries who were both admitted to and discharged from hospice care between October 1, 2005, and September 30, 2008. The figure reflects only routine home care received by patients who did not receive any general inpatient care or inpatient respite care. Visits by physicians (which are paid separately) and volunteers (which are nonreimbursable) are excluded.

Source: MedPAC analysis of patient-level data furnished by 17 nonprofit hospices.

FIGURE 2E–A2

Average number of routine home care visits and visit hours per week by length of stay for 17 hospices

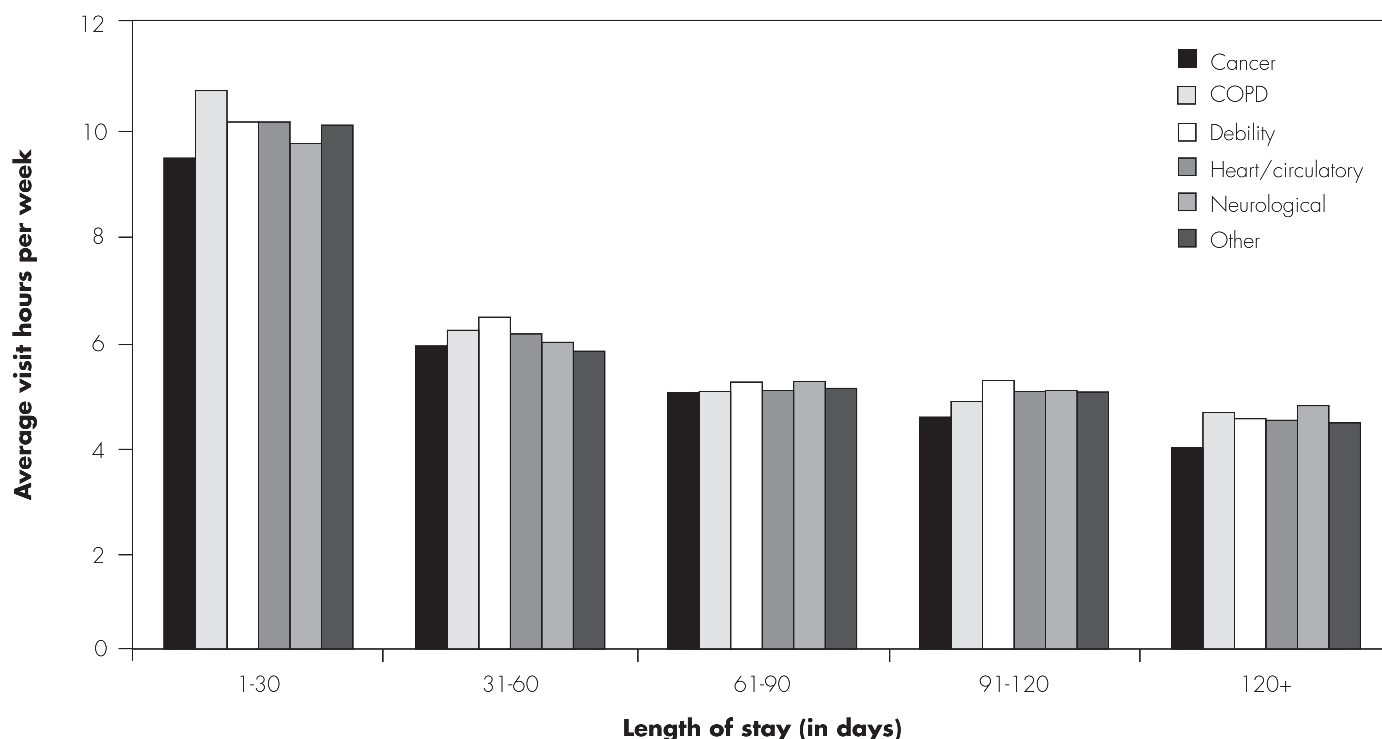


Note: Data include Medicare beneficiaries admitted and discharged between October 1, 2005, and September 30, 2008. The figure reflects only routine home care received by patients who did not receive any general inpatient care or inpatient respite care. Visits by physicians (which are paid separately) and volunteers (which are nonreimbursable) are excluded.

Source: MedPAC analysis of patient-level data furnished by 17 nonprofit hospices.

FIGURE 2E–A3

Average visit hours per week by length of stay and diagnosis for 17 hospices



Note: COPD (chronic obstructive pulmonary disease). Data include Medicare beneficiaries admitted and discharged between October 1, 2005, and September 30, 2008. The figure reflects only routine home care received by patients who did not receive any general inpatient care or inpatient respite care. Visits by physicians (which are paid separately) and volunteers (which are nonreimburseable) are excluded.

Source: MedPAC analysis of patient-level data furnished by 17 nonprofit hospices.

Hospice visit patterns by length of stay and location

The Commission previously indicated that it might consider examining whether a different payment structure is needed for hospice care provided in nursing facilities (Medicare Payment Advisory Commission 2009). Our prior work demonstrated that patients in nursing facilities tend to have longer stays than patients residing in the community, due in part to the higher prevalence of conditions that tend to have longer lengths of stay (e.g., Alzheimer's disease, dementia, debility) (Medicare Payment Advisory Commission 2009). Aside from the differences in length of stay, there are questions about whether hospice patients in nursing facilities and the community receive similar levels of service and whether the potential overlap in services furnished by the hospice and the nursing facility results in a reduced workload for each entity. In addition, the provision of hospice care in a centralized location may yield savings in travel time and allow a hospice to employ fewer staff to treat a given number of patients.

Analysis of the two data sources suggests that nursing facility residents receive slightly more hospice visits than patients in the home, once length of stay is taken into account. According to the claims data, hospice patients in nursing facilities received fewer nurse visits and more home health aide visits than hospice patients at home (who have a similar length of stay), with nursing facility patients (in most length-of-stay categories) receiving slightly more total visits per week than patients in the home (Table 2E-A2). Not shown in the table, analysis of the data for the 17 hospices also indicates higher average visits per week and average visit hours per week among nursing facility residents compared with patients in the home, due to more home health aide visits. Residents in assisted living facilities also appear to receive more home health aide visits than patients in the home.

TABLE 2E–A2

Average visit hours per week by type of visit and location of visit, Medicare claims data, July to December 2008

	Length of stay (in days)			
	1–30	**31–60**	**61–90**	**91–180**
Average total visits per week				
Home	6.7	4.8	4.3	4.0
Nursing facility	6.7	5.2	4.8	4.6
Assisted living facility	7.3	5.4	4.7	4.8
Average nurse visits per week				
Home	4.2	2.6	2.1	1.9
Nursing facility	3.7	2.3	1.9	1.8
Assisted living facility	4.6	2.7	2.2	2.1
Average home health aide visits per week				
Home	1.7	1.8	1.7	1.8
Nursing facility	2.0	2.3	2.4	2.4
Assisted living facility	1.9	2.2	2.1	2.3

Note: The numbers for nurse and home health aide visits do not sum to the total because the total also includes social worker visits. Data include only those beneficiaries who were admitted to and discharged from hospice between July 1, 2008, and December 31, 2008. The table reflects routine home care and continuous home care visits received by patients who did not receive any hospice general inpatient care or inpatient respite care.

Source: MedPAC analysis of Medicare hospice 100 percent standard analytic file from CMS.

The findings of hospices furnishing more home health aide visits to nursing home patients, as well as assisted living facility patients, may seem counterintuitive as patients in facilities have access to aide services through the facility in addition to the hospice. It is uncertain what accounts for the greater home health aide visits in these facilities. It may be that the ability to provide care in a centralized location, without travel between patients, facilitates the provision of more home health aide visits. It may also be that patients in nursing facilities and assisted living facilities may be more likely to lack family members who are able to provide assistance and support and that additional aide visits help fill that need. It also raises questions about whether the provision of home health aide visits by hospices might be attractive to facilities in bringing hospices in to serve their patients.

Hospice visit patterns by length of stay and hospice characteristics

The Medicare claims data on hospice visits allows us to examine the frequency of hospice visits by a number of hospice characteristics, such as ownership status, type of hospice (freestanding, home health based, hospital based), size of hospice, and rural and urban location. Average hospice visits per week do not appear to differ substantially for hospices in rural and in urban areas or for hospices of different sizes. The claims data, however, indicate differences in average visits per week by type of ownership and type of hospice. Comparing patients with similar lengths of stay, freestanding hospices, home-health-based hospices, and for-profit hospices appear to provide slightly more home health aide visits than their counterparts, which results in slightly higher total visits per week for these hospices on average.

What accounts for the differences in home health aide visits per week among these providers is uncertain. For example, it is possible that some hospices, like nonprofit hospices, may rely more heavily on volunteers for home-health-aide-type services; we do not see volunteer visits in our data. It might also be a reflection of differences in location of care across different types of providers. For example, for-profit hospices tend to serve more nursing facility patients, who receive more home health aide visits. Another factor might be the greater prevalence of

long stays among certain types of hospices. The higher profitability of long stays might facilitate the provision of more aide visits per week for patients in hospices with more long stay patients.

Implications

The analyses developed from the two new data sources lend further support to the need for a payment system that is better aligned with the U-shaped pattern of hospice care, as previously recommended by the Commission. The analyses conducted here suggest that, in developing such a payment system, it would be important to consider several aspects of hospice visits, including the number of visits, duration of visits, and mix of nurse and home health aide visits. As more data on hospice visit patterns become available, the Commission intends to continue to analyze the data and their implications for payment system reform. While hospice visits make up the largest component of hospices' costs, hospices incur costs in a number of other areas, such as prescription drugs and home medical equipment. In the future, the Commission may also examine patterns in these types of nonvisit costs across patients with particular characteristics. Such patient-level analyses would depend on the availability of proprietary data from one or more hospices, as national patient-level data on nonvisit costs are not available. We also may continue to explore visit patterns among nursing home patients and examine how the costs associated with providing services to them (e.g., travel time and staffing costs) differ from those for other patients to the extent that such data become available. ■

Endnotes

1 Under the Medicare hospice benefit, there are four types of care: routine home care, continuous home care, general inpatient care, and inpatient respite care. Routine home care, which can be provided in a variety of settings, including the patient's home, a nursing facility, an assisted living facility, and other types of facilities, makes up more than 95 percent of hospice days. There is a flat payment per day of about $143 for routine home care regardless of whether any visit is provided on a day. Continuous home care is provided for more than eight hours per day during a time of crisis and is paid an hourly rate.

2 At this time, the Medicare claims data include only information on the number and type of visits and not the duration of visits. The Commission recommended in March 2009 that hospices report additional details on visits, including the length of time. Beginning January 1, 2010, hospices are required to report the length of visits (in 15-minute increments) as well as additional types of visits (physical, speech, and occupational therapist visits) and phone calls by social workers. We expect this additional, more detailed claims data to be available for analysis in 2011.

3 About 120,000 Medicare patients in 14 states were enrolled and discharged by these hospices during this time period. The 17 hospices vary in terms of number of patients served, percent of patients with various diagnoses, average length of stay, percent of stays greater than 180 days, and percent of patients treated in various locations such as home and nursing facilities.

References

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