Published in final edited form as:

Am J Hosp Palliat Care. 2013 November ; 30(7): 640–647. doi:10.1177/1049909112469717.

Characteristics of Hospice Patients Utilizing Hospice Facilities

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Abstract

Given the increasing popularity of a hospice inpatient/residential facility (HIRF) among hospice patients and their family members, examining who uses HIRFs has been of increasing importance. Using the 2007 National Home and Hospice Care Survey (NHHCS), we found that about 14% of hospice patients received care in a HIRF in 2007. Characteristics of patients associated with HIRF use largely match the industry norm for a general inpatient level of care, and include: having no caregiver, or having an incapable caregiver; having imminent death; and being directly admitted to a hospice after discharge from a hospital. Given a recent stricter enforcement of reimbursement rules, however, we call for close monitoring of any change in the number of HIRF beds—particularly in rural and low-income urban areas.

Keywords

hospice facility; NHHCS survey data; Medicare hospice; hospice access; geographic distribution of hospice inpatient/residential facilities; end of life care

INTRODUCTION

A majority of Americans express a strong preference for dying at home,^{1–2} but for many, their actual experiences have been the opposite.^{3–4} Even with hospice care that facilitates home death, not all hospice patients are able to achieve home death. This is hardly surprising because home death cannot be a desirable or feasible outcome for all. Other concerns such as pain and symptom control, safety, and quality and quantity of life become more important to patients and/or family members with time.⁵ In a national survey, seriously ill patients and recently bereaved family members rated dying at home as least important of nine attributes associated with quality care at the end of life.⁶

For some of those who wish to die at home but cannot do so, a hospice inpatient/residential facility (HIRF) is becoming an increasingly popular option. Hospice care is typically delivered to the patient's residence, that is, private homes with family members as primary caregivers. If the patient is at a nursing home or assisted living facility, then hospice care is delivered there, assuming that the facility staff become the primary caregivers. States are also increasingly allowing home-based hospice providers to own or lease space dedicated to

hospice patients only. A hospice residential facility is considered by a patient who lives there to be his or her primary 'home'. A hospice staff member fills the role of family caregiver with the provision of residential care for 24 hours a day, 7 days a week. The State of New York was the first state that, in 1995, passed a hospice residential facility law called the Hospice Residence law (Chapter 532 of the Laws of 1995) allowing a home-based hospice provider to operate a homelike living facility for the benefit of its patients lacking caregivers to complement hospice care in their own homes. The law was intended to lessen the number of hospitalizations and/or nursing home placements. A number of states now have residential hospice facility provisions, and in some states the facilities do not have to transfer their residents with inpatient care needs to hospitals or skilled nursing facilities (SNF), as those facilities are allowed to provide acute care within their own facilities. For example, the State of New York allows Hospice Residences to use up to two beds dually for both residential and GIP care.

Medicare accounts for nearly 90% of all hospice patient care days⁷ and Medicaid and private plans follow Medicare reimbursement system where a hospice provider is paid per day by one of the four levels of care. While a Medicare-eligible patient stays in residential care, he/she pays for room and board to the hospice residential facility while Medicare pays the hospice residential facility at the routine home care level rate (\$151 for FY 2012), the same rate that Medicare would pay if the patient were to stay in the home. On the other hand, Medicare pays the residential facility at the rate of general inpatient (GIP) level care (\$672) if the same patient switches to that level of care for pain/symptom management for a short period of time. The patient does not pay room and board while he/she receives GIP care as room and board cost is included in the Medicare payment. A hospice residential facility can also be used for respite care for the primary caregiver for which Medicare pays \$156 per day. For respite care, the patient does not pay room and board and respite care is limited to once each benefit period for a maximum of five days.

On the other hand, there is a hospice inpatient facility that provides predominantly GIP level of care. For example, a hospice leases one floor of a hospital building and hospice patients often come directly from the hospital. Patients may die there or be discharged to their home or to a nursing home after being ready for discharge. Medicare usually pays at the GIP care rate.

There is another type of hospice inpatient facility, the freestanding facility, which is not part of a hospital or SNF. This type of facility is gaining popularity among patients, and hospice providers have been constructing new facilities that are often located in suburban areas that offer a home-like atmosphere with private rooms, family rooms, family kitchens, and a 24-hour visitation policy. A freestanding hospice facility typically provides both residential and inpatient care. By including both a unit of residential beds and a unit of inpatient beds, a freestanding hospice facility hopes to increase the occupancy rate and thus, its fiscal viability. Although per-patient profits are higher for GIP care, inpatient beds turn over much faster than residential beds; the average length of stay is 30 days for residential care and only 5 to 6 days for GIP care.⁸ Furthermore, to be reimbursed at the general inpatient care rate, a hospice must document that the patient meets the criteria for that higher level of care. In addition, caring for acute patients is more costly than caring for residential patients. For

example, federal and state regulations require a 24-hour on-site presence of a registered nurse (RN) for acute patients. In addition to a mix of care, hospices prefer a large number of beds in their freestanding facilities, to achieve economies of scale.

Until recently, inpatient hospice care was provided almost exclusively in beds in hospitals contracted with hospices. This model, often called the 'scattered bed model', is still the most common model of inpatient care.⁹ For patients transferred to hospitals, hospices have to follow the regulations presented in the Medicare Conditions of Participation (42 CFR Part 418)¹⁰, which mandate that service levels and visits be congruent across care sites. If the hospice decides to follow NHPCO guidelines,¹⁰ then it must have a minimum of one interdisciplinary team member contact per day (primarily visits), supplemented with volunteer visits. In spite of this requirement, the hospice must use most of its Medicare payment to reimburse the hospital for patient costs. Furthermore, transfer to a hospital may increase the likelihood that a patient will choose to quit hospice and switch to curative treatment.⁹ On the other hand, in order to keep their hospice care, a patient may feel forced to transfer to a hospital that is not his or her choice for inpatient care.⁹

Not all patients transferred to hospitals receive GIP care. Some patients might need hospital level of care for acute medical events, such as an injury (fall), acute deterioration of a chronic condition not related to a hospice diagnosis, or development of a new condition. For such patients, Medicare pays the hospice at the rate of routine home care level, while the hospital files a claim with regular Medicare.

In this study, we do not differentiate hospice inpatient facilities and hospice residential facilities, primarily because the data we use does not as well. However, the data available seems to indicate that GIP care may be dominant in a HIRF. About 520 home-based hospice providers in operation in 2009 had HIRFs. About 48% of HIRFs provided predominantly GIP care; about 16% provided mainly residential care; about 36% provided mixed inpatient and residential care with both residential and inpatient beds in the building. The percentage of hospice patients receiving care in an HIRF (as a place of death) is increasing, with almost 22% having utilized an HIRF in 2010.⁷

Compared to hospice care provided in a hospital, a HIRF appears to offer a higher standard in terms of quality and efficiency, since having its own facility gives a hospice more overall control over the quality and cost of care [Forman 2003]. Previous studies also indicate that the satisfaction level among families of HIRF residents is higher than in any other setting.^{5, 8-9} Satisfaction with care provided in HIRF was high among family members of hospice decedents, with personalized care, cleanliness of the facility and the patient, and proximity to nature being counted as reasons for high satisfaction.⁵ When a HIRF was offered as an option, cancer patients and their caregivers only preferred death at home 36% of the time; 32% had an equal preference for home or a HIRF, and 29% preferred death in a HIRF.¹⁰ Given the rising number of HIRFs and their increasing popularity, examining characteristics of patients utilizing such facilities is of increasing importance to ensure access to HIRFs.

There have been few studies done to answer the question of who uses HIRFs. Although hospice residential facilities with only residential beds have been in operation for quite a long time, large freestanding HIRFs providing all levels of care including routine and GIP are a relatively new phenomenon.^{11–13} Consequently, there is a paucity of data in this area.

The limited research on HIRFs treat HIRFs as part of an inpatient setting, but not as distinguishable sites of care. For example, Johnson et al. (2005)¹⁴ combined HIRFs and hospitals into one category - an inpatient setting for hospice patients and tried to find out which factors predicted hospice patients' death in an inpatient setting (HIRF and hospitals) away from a hospice patients' home. Their assumption was that the factors affecting death in HIRFs and hospitals are the same. However, that assumption may not be valid.

Objectives of the Study

The first objective of this study is to provide national baseline data on the extent to which HIRFs are utilized using a nationally representative of patients discharged from hospice. We not only focus on HIRF as a place of discharge (i.e., the site transferred from 'home' settings including nursing homes or assisted living facilities), but also as a place of admission (when they first begin to receive hospice care). The 2007 National Home and Hospice Care Survey (NHHCS) began to include HIRF as one of the options for the sites at admission (or on the first day of hospice) and at discharge (or on the last day of hospice). The NHHCS also provides rich data on individual patient characteristics, hospice services utilized, and characteristics of hospice agencies, among others. The second objective of this study is, based on this individual-level data, to identify patients' characteristics associated with HIRF use. We used all hospice patients regardless of discharge status (death or live discharge) to explore HIRF use not limited to a place of death.

METHODS

Data

Using the 2007 National Home and Hospice Care Survey (NHHCS),¹⁵ we examined a nationally representative sample of 2.7 million patients discharged from hospice, primarily due to death (84%). At the first stage of sampling, more than 15,000 home health and hospice agencies were stratified by three agency types (home health only, hospice only and both care) and three metropolitan area status.¹⁶ A sample of 1,545 agencies was randomly selected with probability proportional to agency staff size. Among them, 1,461 selected agencies were eligible (95%), and 1,036 agencies agreed to participate (unweighted, 71%; weighted, 59%).¹⁶ At the second stage of sampling, a computer algorithm was made to randomly select up to 10 current patients per home health agency, up to 10 hospice discharges per hospice agency, or a combination of up to 10 current home health patients and hospice discharges per mixed agency.¹⁶ Hospice patients were sampled from discharges from hospice during a 3-month period before the month of the agency interview, while home health patients were sampled from the total number of patients on the agency rolls as of midnight on the day before the agency interview.

Data were collected through in-person one-on-one interviews with the hospice staff member who knew each sampled patient. Questions were answered in consultation with the patient's medical record or other records. No patients or family members were interviewed.

Definitions of Key Variables

Place before hospice care—an agency staff was first asked, “Immediately before the patient began receiving hospice care from this agency, was he/she an inpatient in a hospital, nursing home, or some other kind of health care facility?” If the answer was positive, interviewees selected one of the following options:

- 1 hospital/emergency room
- 2 nursing home/skilled nursing facility/sub-acute facility
- 3 rehabilitation facility
- 4 assisted living
- 91 other (specify)

We examined the specified types of Option 91, which were variants of adult foster care or home health. Home health and adult foster care are not generally considered health care facilities. For the purposes of our analysis, categories 2, 3 and 4 were combined, and category 91 and unknown responses were coded as staying in the home.

Place at Admission—an agency staff was asked, “Where was the sampled patient staying when (he/she) first began receiving hospice care?” Response options were:

- 1. this agency's inpatient/ residential facility
- 2. private home or apartment
- 3. residential care place
- 4. skilled nursing facility (nursing home)
- 5. hospital
- 91. other place (specify)

The wording of Option 1 presents a problem with our study purposes. Although a hospice agency tends to transfer only those patients admitted to its own hospice program to its own HIRF, it is not rare for some agencies without their own facilities to transfer their patients to other agencies' HIRFs. For example, for several patients in our NHHCS data, agency staff specified ‘CONTRACT HOSPICE HOUSE’ as ‘other place’, Option 91. We carefully examined all of the specified ‘other place’ types. If the ‘other place’ indicated an HIRF variant (e.g., Hospice House), it was recorded as Option 1, instead of 91. For our analytical purposes, categories 3, 4 and 91 (except for HIRF variants) were combined to Nursing Home/Other Residential group. The number of cases with Category 91 except for HIRF variants was small (8 records): three records were mostly associated with residential care facilities (e.g., adult foster care) and 5 records had no specified names.

Place at Discharge—NHHCS asked the question, “Where was the sampled patient staying on the last day (he/she) received hospice care?” The options were identical to those for the question concerning place at admission. We recoded 91 to 1 if the specified ‘other place’ indicated an HIRF variant. For our analytical purposes, categories 3, 4 and 91 (except for HIRF variants) were combined to Nursing Home/Other Residential group. There were 30 cases with Category 91 except for HIRF variants: 27 names were mostly associated with residential care facilities (e.g., senior citizen housing) and 3 had no specified names.

Emergency Care—NHHCS asked the question, “Did the patient use any of these services for emergent care during the last 60 days (prior to interview) since admission?” The staff’s response options included:

- 1 hospital emergency room (includes 23-hour holding)
- 2 doctor's office emergency visit/house call
- 3 outpatient department/clinic (includes urgent center sites)
- 4 no emergent care

In our study, emergency care was dichotomized to emergent care and no emergent care (Option 4).

Continuity of place of residence from first to last received hospice care—The Center for Disease Control and Prevention’s Center for Health Statistics derived this variable from the answers to the two questions above regarding places at admission and at discharge. The variable had two values (the same or different).

Level of Care at Discharge—A hospice agency can bill one of the four levels of care per day: Routine home care, Continuous home care, General inpatient care and respite inpatient care. Routine home care, which is reimbursed at the lowest reimbursement rate, is a default care unless the three higher levels of care are not provided. General inpatient care, reimbursed at the highest reimbursement rate, should be provided only in the place of service specified by Medicare—a Medicare certified HIRF, a Skilled Nursing Facility (SNF) and a hospital. Respite level of care can be provided in a nursing home, in addition to the three places for general inpatient care above. Continuous home care may be provided only in the patients’ home. For our analysis, general inpatient care and respite care are combined into one category.

Statistical Approaches and Outcome Measures

The 2007 NHHCS patient file was designed to include both home health patients and discharged hospice patients in one file. Thus, the NHHCS sponsor, Centers for Disease Control and Prevention (CDC), strongly recommended ‘a subpopulation analysis’ so that, even if a study exclusively focuses on discharged hospice patients, the study not remove home health patient records in order to calculate standard errors adjusted for complex sampling design.²⁷ If we exclude home health patients, the two sampling design variables indicating nine strata (3 agency types: home health, hospice, and mixed; and 3 agency locations: Metro, Micro and Neither) and clusters (agencies) are not fully reflected in the

calculation of standard errors, resulting in fewer degree of freedom for significance testing.^{17–20}

We used SAS SURVEY procedures (SAS 9.2, Research Triangle Park, North Carolina) for all analyses. Specifically, for demographic/clinical characteristics of discharged hospice patients, we used PROC SURVEYFREQ adjusting for sampling design and reported weighted percentages with corresponding 95% confidence intervals. PROC SURVEYLOGISTIC with Domain statement included to adjust for sampling design was used for binomial logistic regression analyses done to determine the factors that affect HIRF care use and hospital care use.

Use of HIRFs—using both places at admission and at discharge, we created a measure of HIRF utilization. If a patient used an HIRF either at admission or at discharge, the patient was recoded as having utilized an HIRF. There was no information available from NHHCS on the number of times the patient was transferred; therefore, the patient could have changed sites only once or multiple times. Binomial logistic regression for this dichotomous variable was used.

Use of Hospital—similarly, using both places at admission and at discharge, we created a measure of hospital care use. If a patient used a hospital either at admission or at discharge, the patient was recoded as having utilized a hospital. When we assessed the overlap of this variable with the use of an HIRF, little overlap was found. Binomial logistic regression for this hospital care use variable was used.

Patient Characteristics

Patient characteristics we examined include readmission to hospice, category of days hospice care received (in categories of less than 7 days, 7 to 30 days, 31 to 180 days, and 181 days or longer), reason for discharge (death or discharged alive), patient demographics (gender, age, marital status), primary payment source (e.g., Medicare/Medicaid), whether having a primary caregiver, diagnoses classified into three groups using codes from the International Classification of Diseases, Ninth Revision, Clinical Modification (cancer [140–239], dementia [290.0, 290.42, 294.8, 294.9, 331.0, 331.11, 331.4, 331.82, and 331.9], and other), emergency care received, and MSA. MSA is part of an agency characteristic, defined as whether the hospice agency is part of the metropolitan statistical area, categorized by the U.S. Census as metropolitan (at least 1 urban area with a population 50,000), Micropolitan (an area with a population of 10,000–49,999), or “neither,” (e.g., rural). We used this MSA variable as a proxy measure for the location of patients’ residences.

RESULTS

Locations of Care of Hospice Patients

Our study was based on 4,727 patients discharged from hospices in 2007, representative of an estimated 1.03 million patients discharged from hospices in 2007. Table 1 presents the locations of care of hospice patients prior to their hospice stay, at hospice admission, and at discharge after hospice enrollment. About 4 in 10 hospice patients were in the hospital before hospice enrollment. About 7% of hospice patients at admission were placed in the

HIRF, while 14% were discharged from the HIRF. About 10% started to receive hospice care in the hospital, while 9% were discharged from the hospital. For about 17% of hospice patients, the location of care changed during their hospice stay. About 14% of hospice patients were in the HIRF during all or part of their hospice stay, while 13% spent time in the hospital.

About 90% of patients in the HIRF at discharge received a GIP or respite level of care, compared with 77% of patients in the hospital who received the same levels of care. Many of patients receiving GIP care in the hospital may have been directly admitted from the hospital to hospice care without leaving the hospital. Those may die in the hospital or after medication adjustment get discharged to other settings. This onsite hospital discharge and simultaneous hospice admission is explicitly authorized in Medicare regulations. On the other hand, for some of the remaining 23% of hospice patients in the hospital who received non-inpatient level of care, they may have received treatment for a condition unrelated to the terminal condition. In such case, Medicare pays the hospice agency at the rate of routine home care for continuing case management services including coordination of care and discharge planning, while the hospital files a claim for the treatment under regular Medicare hospital benefit.

Other Characteristics of Hospice Patients

The demographic and hospice use variables are presented in Table 2. About 17% of hospice patients were 0–64 years old, with 38% being 85 and older. About 9% had no caregiver; about 7% had unplanned emergent care; about 84% died at discharge. About 32% were discharged within less than 1 week. About 4% of hospices were located in rural areas (neither metro- nor micropolitan areas).

Characteristics Associated with Hospice Inpatient/Residential Facility Use

Table 3 presents odds ratios and confidence intervals from a logistic regression of HIRF use as a binary variable. Patients having a caregiver were less likely to use HIRFs. Dementia patients were also less likely to use HIRFs. On the other hand, five characteristics of patients were positively related with HIRF use and they include: 1) being in the hospital before hospice enrollment; 2) being placed in the different places at admission and at discharge; 3) being discharged within less than one week; 4) Death discharge; and 5) being enrolled in hospice agencies located in metropolitan areas.

Characteristics Associated with Hospital Use

Characteristics associated with hospital care use were very similar to those associated with HIRF use (Table 4). However, there were three exceptions: 1) whether patients died at discharge had no statistically significant relationship with hospital care use during their hospice stay; 2) whether patients had unplanned emergent care was strongly related to hospital use; and, 3) patients whose hospice agency was located in a rural area were more likely to use hospitals during their hospice stay.

DISCUSSION

Using a nationally representative sample of patients discharged from hospices in 2007, we found that about 1 in 5 hospice patients utilized either HIRFs or hospitals during their hospice stay. In addition, about 17% of hospice patients changed their location of care during their hospice stay; some of them were transferred from their home to a HIRF or hospital. This is contrary to the popular belief that hospice patients often stay in the same place until death.

Our findings suggest that in 2007, hospice agencies utilized HIRFs for patients with no primary caregiver outside of the agency, and patients who came close to death, the two patient characteristics that were not significantly associated with hospital use. We also found that the level of care for the majority of HIRF patients (90% of HIRF patients) in 2007 was the GIP level of care—the highest reimbursement rate per day that agencies can receive for a patient. However, concerns that this GIP level of care was being misused, along with the rapid growth of Medicare hospice spending, prompted a large scale of audits on GIP claims in 2008, with over 40% of 770 GIP claims reviewed being denied, amounting to more than 1.5 million dollars denied.²³ The Office of the Inspector General (OIG) continued to list a medical review of GIP care in its Work Plan, for FY 2011, 2012 and 2013 consecutively.^{24–26} The OIG 2012 Work Plan included a project that assessed the appropriateness of hospices' GIP care claims made between 2005 and 2010.²⁴ It also included a plan of targeting claims for GIP care for patients directly admitted from a hospital to a hospice and examining the relationships—financial and/or ownership arrangements—between the hospital and the hospice. The OIG's 2013 Work Plan also has a review of GIP care in 2011. Articles from audit results are available to hospice providers. After a medical review of 34 GIP paid claims by seven Rhode Island Medicaid hospice programs, the OIG reported in 2012 that 19 of the 34 claims did not meet the requirements for GIP care and should have been billed as routine home care.²⁷ Another review focused on GIP care claims highly vulnerable to fraud; one such type was GIP care of seven or more days in a monthly billing period; this audit reported a denial rate of nearly 62%.²⁸ Armed with these audit results, the CMS has made it clear to hospice providers that care can be billed at the GIP level in the event of imminent death, a direct discharge from a hospital to a hospice, or a caregiver breakdown, but *only* when the hospice provider can provide the documentation supporting a need for aggressive pain/symptom management. Hospice care billed previously as GIP care is now strictly reimbursed only at the routine care rate or respite care rate—leading to a considerable reduction in payments. This stricter enforcement may have dampened agencies' frenzied pace in building new freestanding HIRFs and/or may have induced some agencies to close their existing HIRFs. Indeed, one agency in Michigan recently closed its two HIRFs, citing the reduction in reimbursement rate from the GIP level to routine level of care.²² Since room and board cost is not reimbursed when a HIRF patient receives the routine level of care, agencies would try to avoid opening a new HIRF in communities where the residents cannot afford the expensive room and board cost. A future study, evaluating state policies of financial support for room and board costs of Medicaid-eligible HIRF residents, is needed to assess the potential impact of such financial support on the availability of HIRFs.

There was another noteworthy finding: patients served by hospice agencies located in rural areas were more likely than those served by agencies in metropolitan areas to use hospitals. This suggests that, despite a relatively equitable geographic distribution of in-home hospice programs²³, HIRF beds may not be available to patients in rural areas. In other areas, swing beds are one option for hospice care; they are more likely to be the only option in the most rural areas for patients in crisis due to symptoms related to their hospice diseases. If those patients had lived in metropolitan areas where HIRF beds were available, they would have been transferred to a HIRF, not to a hospital. Given that patients in rural areas tend to live alone or have no capable caregiver in their homes, and a hospice agency reported very high traveling costs to deliver care to rural areas, CMS funded a 'rural hospice' demonstration project in 2005 where two HIRFs were selected to provide both residential and inpatient hospice care services.²³ There was no specific payment method for room and board, except that the awardees did not have to comply with the 20-percent cap on inpatient care days for these individuals. Although the project intended to determine the appropriate payment rate for making a rural HIRF sustainable, concerns about soaring Medicare hospice costs have halted the extension of such efforts beyond the pilot project. Although some states use HIRF licensure laws or Certificate of Need (CON) programs to ensure an equitable distribution of HIRF beds across geographic areas, there is currently no systematic review of state policies relevant to the distribution of HIRF beds.

We have to note some limitations. First of all, the reported rates of HIRF and hospital use may be underestimated. The NHHCS data record the patients' locations on the first and last days of hospice care, but do not record how many times they were transferred to other sites in between the first and last days of hospice care. Furthermore, the NHHCS excludes HIRFs operated by other agencies than the survey-selected agencies. Although we attempted to identify HIRFs that would otherwise have been classified as 'other' sites, not all 'other' sites were specified by staff.

CONCLUSION

About 14% of patients discharged from hospices in 2007 received care in a HIRF during all or part of their hospice stay, while a very similar percentage of patients (13%) received care provided in a hospital. Characteristics of patients associated with HIRF use largely match the characteristics of patients receiving a GIP level of care, according to CMS billing reimbursement data, and include: having no caregiver, or having an incapable caregiver due to stress or illness; having imminent death; and being directly admitted to a hospice after discharge from a hospital. The recently stepped-up scrutiny of GIP level of care may have chilly effects on hospice agencies' attempts to increasing HIRF beds. We call for close monitoring of any resulting shifts in the availability of HIRF beds—particularly in rural and low-income urban areas, where the availability of HIRF beds can be chillingly disproportionate.

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Hospice General Inpatient Coverage and Documentation OIG work plan

http://www.cgsmedicare.com/hhh/pubs/mb_hhh/2012/03_2012/index.html < **Hospice Widespread Edits Continue to Show Errors**

One such topic is utilization of General Inpatient Services (GIP) of seven or more days in a monthly billing period. Claims that were reviewed for this edit last quarter received a denial rate of 61.44%.

Office of the Inspector General's (OIG) focus seven compliance plan elements and provides a valuable tool to assist in determining the root cause(s) of compliance or performance problems.

Assessing Performance

Once again, documentation plays the key role.

1. Would clinical record reviews consistently demonstrate:
 - a. What precipitated the patient's need for the higher level of care?
 - b. What interventions were put in place to try to avoid it?
 - c. For every day of care at the higher level does the patient's clinical record indicate why it is still necessary?
 - d. How professional management was accomplished?
2. The descriptions for what necessitates GIP or CC are broad and may be open to interpretation. How is the decision made in your hospice?
3. Does the patient record demonstrate team participation in the decision?

Table 1

Location of Care of Hospice-Discharged Patients

	No.	Weighted %	LCI	HCI
Location prior to Hospice Enrollment				
Home	2091	40.97	38.18	43.76
Hospital/ER	1638	37.60	34.62	40.59
Other *	998	21.43	19.01	23.85
Location at Admission				
Home	2830	55.39	52.30	58.47
NH/Other Residential	1233	27.28	24.45	30.11
HIRF	250	7.07	5.38	8.76
Hospital	393	10.26	7.58	12.94
Location at Discharge				
Home	2523	52.22	49.14	55.31
NH/Other Residential	1111	25.14	22.17	28.12
HIRF	425	14.08	11.40	16.76
Hospital	396	8.55	6.98	10.13
Consistency in Location				
Same Place	3998	83.44	80.96	85.91
Different Place	708	16.56	14.09	19.04
Had Been Located in				
HIRF	405	11.97	9.60	14.34
Hospital	502	10.83	8.64	13.02
Both HIRF/Hospital	56	2.15	1.09	3.21
Neither HIRF nor Hospital	3745	75.05	71.74	78.36

All percentages were weighted.

Abbreviations: LCI, lower confidence interval; HCI, higher confidence interval; HIRF, Hospice Facility.

* Includes nursing homes, rehabilitation centers, assisted living, and others.

Table 2

Characteristics of Hospice-Discharged Patients

	No.	Weighted %	LCI	HCI
Race/Ethnicity				
White	4096	86.53	84.22	88.85
Black	310	7.62	5.78	9.46
Hispanic	147	4.14	2.75	5.53
Other	79	1.70	1.07	2.33
Age				
0–64	815	16.98	15.48	18.47
65–84	2263	44.91	42.47	47.35
85+	1649	38.11	35.73	40.50
Female	2614	55.04	52.54	57.54
Having Caregiver	4331	91.46	89.62	93.30
Length of Stay				
0–6	1381	32.19	29.89	34.48
7–30	1448	30.40	28.55	32.26
31–180	1347	26.88	24.61	29.14
181+	551	10.53	8.79	12.28
Primary Diagnosis				
Cancer	2095	43.77	41.11	46.43
Dementia	464	11.18	9.52	12.84
Other	2158	45.05	42.46	47.65
Re-admission	336	6.76	5.46	8.07
Emergency care	434	6.48	5.35	7.61
Death discharge	3879	84.34	82.27	86.42
Primary payment source				
Medicare	3833	82.69	80.95	84.42
Medicaid	190	4.00	3.05	4.95
Private	355	9.28	7.86	10.70
All other	222	4.04	3.01	5.07
Location of Agency				
Metropolitan	1739	87.42	85.71	89.12
Micropolitan	1753	9.01	7.53	10.48
Neither	1235	3.58	2.78	4.38

All percentages were weighted.

Abbreviations: LCI, lower confidence interval; HCI, higher confidence interval; HIRF, Hospice Facility.

Table 3

Utilization of a Hospice Facility

Characteristics (reference)	OR	LCI	HCI
Race (White)			
Black	1.05	0.44	2.54
Hispanic	0.49	0.18	1.37
Other	1.80	0.60	5.44
Age, <65			
65–84	1.34	0.77	2.35
85+	1.18	0.57	2.43
Female	1.10	0.74	1.64
Having Caregiver	0.33**	0.18	0.62
Setting Prior to Hospice (Home)			
Hospital	2.92**	1.85	4.61
All other	1.44	0.85	2.45
Change in Location of Care	19.93**	11.79	33.69
Length of Stay, <7 days			
7 to 30	0.44**	0.28	0.69
31–180	0.35**	0.21	0.57
181+	0.51	0.24	1.08
Emergency Care	0.56	0.23	1.37
Discharge, Death	3.44**	1.76	6.72
Primary Diagnosis (Dementia)			
Cancer	2.84*	1.16	6.97
All Others	2.50*	1.10	5.71
Re-admission	0.60	0.28	1.32
Location of Agency (Metropolitan)			
Metropolitan	0.52*	0.30	0.89
Rural	0.22**	0.08	0.63

OR: odds ratio; LCI: lower 95% confidence interval; HCI: higher 95% confidence interval Binomial Logistic Regression was used.

* p<0.05;

** p<0.01

Table 4

Utilization of Hospital

Characteristics (reference)	OR	LCI	HCI
Race (White)			
Black	1.00	0.40	2.47
Hispanic	1.71	0.67	4.39
Other	0.36	0.09	1.42
Age, <65			
65–84	1.05	0.61	1.82
85+	0.72	0.34	1.53
Female	1.13	0.71	1.79
Having Caregiver	0.73	0.39	1.38
Setting Prior to Hospice (Home)			
Hospital	12.78**	6.92	23.61
All other	1.30	0.56	3.01
Change in Location of Care	30.70**	17.97	52.48
Length of Stay, <7 days			
7 to 30	0.49*	0.29	0.85
31–180	0.15**	0.08	0.28
181+	0.14**	0.05	0.36
Emergency Care	2.53**	1.27	5.05
Discharge, Death	0.94	0.50	1.78
Primary Diagnosis (Dementia)			
Cancer	1.55	0.60	4.03
All Others	3.47**	1.42	8.43
Re-admission	0.64	0.27	1.53
Location of Agency (Metropolitan)			
Metropolitan	0.96	0.63	1.47
Rural	1.86**	1.16	2.97

OR: odds ratio; LCI: lower 95% confidence interval; HCI: higher 95% confidence interval Binomial Logistic Regression was used.

* p<0.05;

** p<0.01