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Hospice Agencies' Hospital Contract Status and Differing Levels of Hospice Care

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Abstract

In response to a 2011 finding that approximately 27% of Medicare-certified hospices do not provide a single day of general inpatient (GIP) level of care, the authors explored the extent to which hospices have contracts with hospitals for GIP. Using the 2007 National Home and Hospice Care Survey (NHHCS), we estimated that 1,119 agencies (32%) had no contract with any hospitals in 2007 and half of those with no contract did not have a contract with a skilled nursing facility (SNF) either. As a result, these hospices were unable to provide GIP patient referrals for those in need of inpatient care for acute pain and symptom management. More importantly, not having a contract with a hospital was just one of the factors influencing GIP provision. In the multivariate logistic model, after controlling for contract status with a hospital and other hospice characteristics, agencies in the second quartile of hospice patient census (12 to 29 vs. 73 or more, Adjusted OR=14.10; 95% CI: 4.26–46.62) were independently related to providing only routine home care. These hospices are more likely to rely solely on scatter beds for GIP provision. Given that a significant portion of hospices do not have a contract with a hospital, policy makers need to understand barriers to contracts with a hospital/SNF for GIP and consider a hospice's contract status as one of the standards for hospice certification. In addition, further research is necessary to understand why hospices that do have a contract with a hospital do not make GIP referral.

Keywords

hospice; contract with a hospital; general inpatient care (GIP); discharged alive; NHHCS data; hospice inpatient beds

INTRODUCTION

General Inpatient Care (GIP) is short-term inpatient care for those who suffer from acute pain and uncomfortable symptoms that a hospice cannot adequately manage in a home setting.¹ Without GIP provision, the crisis might cause the patient/family to disenroll from

hospice and seek emergency care. A recent Office of Inspector General (OIG) report² released an important finding: more than a quarter of hospices (27%) that served Medicare patients in 2011 provided no GIP care. This finding was completely unexpected because this 2013 OIG report was planned as part of investigations and audits that started in 2008 out of concerns regarding potential misuse of GIP^{3–5}, the second most expensive level of hospice care⁶. GIP days (as the share of total Medicare hospice care days) decreased from 3.3% in 2007 to 2.2% in 2011.⁷ This downward trend reflects the revised federal regulation of 2008⁸ that imposes stricter coverage requirements for GIP. For example, acute caregiver breakdown, psychological and family crisis situations, and imminent death alone are no longer accepted as qualifying reasons for GIP.⁹

Reimbursement at GIP rate is denied unless the GIP sites are a Medicare-certified hospital, skilled nursing facility, or hospice inpatient unit. A Medicare-certified hospice inpatient unit can be freestanding or in a space shared with a hospital/skilled nursing facility (SNF).¹ According to the 2013 OIG report², 23% of all Medicare hospices (809) provided GIP in inpatient units; 60% (2,163 hospices) provided GIP in hospitals, and 27% (978 hospices) provided GIP in SNFs. Some hospices provided GIP in more than one setting, while 27% provided no GIP in any setting. Hospices that did not provide GIP were more likely to be small, for-profit and newer than those that provided GIP.^{2,10} It should be noted that the studies above did not examine whether the hospices that did not provide GIP had a contract with a hospital/SNF for GIP. According to federal regulation, a hospice must first have a contract with a hospital/SNF before making a GIP referral. The contract is necessary because the regulation holds the hospice responsible for professionally managing the care provided by a hospital/SNF to the patient temporarily admitted for GIP and for paying the reimbursed GIP rate to the hospital/SNF.^{1, 11–12}

At the time of publication, no studies exist on the contract status of hospices for GIP in relation to provision of GIP. Therefore, the major purpose of our study is to understand the contract status of hospice facilities and how closely this relates to provision of GIP. Using nationally representative hospice survey data, our study aims to address the following questions: 1) how many hospices do not have a contract with a hospital?; 2) what characteristics are associated with hospices that do not have hospital contracts; 3) does not having a contract with a hospital impact whether a hospice provides GIP or only routine home care?; 4) What other variables explain why GIP is not provided and only routine home care is provided?

CONCEPTUAL FRAMEWORK

The conceptual framework for this study was the Donabedian model of structure-process-outcome sequence (Figure 1).¹³ Structure influences process; process in turn produces outcomes. Structural elements of our model include contract status with a hospital or SNF for GIP or conditions unrelated to terminal illness, hospice size, hospice type, and other structural characteristics. The process element of our primary interest includes providing GIP or only routine home care. Providing GIP produces outcomes regarding patient/family satisfaction, disenrollment from hospice, and/or continuity of care.^{14,15} Our study examines the first sequence only, which is from structure (e.g., contract with a hospital) to process

(provision of GIP) in the model, since the Medicare hospice benefit GIP level of care was designed on the premise of the latter sequence: provision of GIP for pain and symptom that hospices cannot manage at the home setting prevents disenrollment from hospice and ensures a continuity of hospice care.

Depending on hospices' arrangements for GIP, we can categorize hospices into three groups.^{16,17} The first group of agencies does not have a contract with any hospital or SNF for GIP, meaning that the agencies cannot make a GIP referral for the patients in need of care for acute pain or symptoms. Three options are left for the agencies: discharging the patients alive, transferring them to another hospice, or maintaining a higher than median nurse staffing level to accommodate such high intensity cases.¹⁸ Patients discharged in this manner may seek emergency care in a hospital, a problem which is exactly what hospice care aims to address.

The second group of hospices relies solely on scatter beds in a hospital.^{17,19} The hospices make a contract with a hospital that provides beds on an as-needed basis utilizing beds that are normally used for medical or surgical purposes. A hospice is required to train the hospital personnel who would be providing hospice patient care. Training hospital staff for hospice care is considered the most difficult aspect. Many hospices also find GIP referral based on the scatter-bed approach to be extremely costly.²⁰ With the scatter bed approach, the hospice usually pays the entire GIP daily rate to the contracted hospital. The hospice must then pay a visit to the patient in the hospital every day while the patient is treated.¹² The cost increases when a nurse visit is recommended. Additionally, when transportation for the patient transfer is involved, the cost is not separately covered by Medicare. Furthermore, since the GIP rate is far below the hospital reimbursement rate for the same bed, it is difficult to establish contracts in hospital bed shortage areas. For example, in California, Vitas, the largest hospice agency whose hospice programs are in operation in 22 states, has GIP beds only in SNFs and not in a hospital,²¹ suggesting that hospitals in California do not provide beds to hospice patients for GIP unless the hospice patients are enrollees in a hospital-affiliated hospice such as Kaiser Hospice that accepts only patients with Kaiser HMO plans.

The third group of hospices has a hospice unit (e.g., a couple of rooms or a wing inside a hospital or SNF) dedicated to their hospice patients and guarantees payment per day, paying extra for ancillary services based on actual days of care.^{17,19} It is costly for the hospice if the beds are not utilized. Some agencies of this group go further to operate and staff the unit under an outside resources contract. The beds are added to the licenses of the hospices even though they remain licensed to the hospital/SNF. The dedicated hospice staff reduces training burden and ensures quality care because they provide care to hospice patients only. However, the hospice having the unit must keep the unit occupied to break even financially, although the host facility may discharge its patients to the hospice unit.²² Finally, this third group also includes hospices owning freestanding facilities that house their own hospice beds. Freestanding hospice facilities tend to be larger and more likely to provide mixed care (both routine home care and GIP),²³ which can enhance their financial viability. It may explain the steady increase in the number of freestanding hospice facilities.²³ There are clear advantages for these hospices owning freestanding facilities and their patients: a high level

of satisfaction for patient/family,¹⁴ readily available GIP beds¹⁸, savings achieved by concentrating high intensity patients in one place controlled solely by the hospice.²⁰ By directly providing GIP in their units and/or freestanding facilities, the third group of hospices do generate revenue but only when the beds are occupied, which provides a motivation for a potential overuse of GIP care. Since 2008, Medicare/Medicaid hospice benefit programs have scrutinized medical reviews of GIP care³⁻⁵ and several investigations have even led to closure of some hospices.²⁴ However, according to a recent OIG report², compared to hospices providing GIP in hospital/SNF settings, hospices providing GIP either in their units and/or freestanding facilities had longer GIP days of care and accounted for a majority of GIP days. Nearly 27% of hospices did not provide GIP at all in 2011. Our study focuses on characteristics of hospices that do not provide GIP.

METHOD

Data

We used the agency-level public-use data from the 2007 National Home and Hospice Care Survey (NHHCS), which is a nationally representative sample of home health and hospice agencies and their patients.²⁵ The 2007 NHHCS is the most recent survey since the National Center for Health Statistics implemented it in 1992. In the first stage of sampling for the 2007 NHHCS, more than 15,000 home health and hospice agencies were identified and stratified by 9 strata—three agency types (home health only, hospice only and mixed care) and three metropolitan area status categories (metro, micro and neither).²⁶ Then a sample of 1,545 agencies was randomly selected from the 9 strata with a probability proportional to agency staff size. Among them, 1,461 selected agencies were eligible (95%), and 1,036 agencies agreed to participate (un-weighted, 71%; weighted, 59%).²⁶ An NHHCS interviewer contacted the administrator (or designee) of each sampled agency and obtained information.

Dependent and Independent Variables

As outcome measures, we evaluated each hospice: 1) whether a hospice had a formal contract with any hospital; 2) whether a hospice was providing GIP to any patients at the time of survey. The second question was created based on the survey question, “*How many of this agency’s hospice patients are currently receiving each of the four levels of care?*” Note that the survey question about the number of patients receiving each level of hospice care was not for the entire year but only at the time of survey. The aforementioned question may be a problem for a small hospice. For example, it is likely that a hospice with a 10 patient census is not providing GIP to any patient on the day of survey. Thus, it does not necessarily mean that it did not provide any GIP for the entire year. By comparison, a large hospice (e.g., 500 patient census) is most likely to provide GIP to at least one hospice patient during the interview period. In addition, a hospice with its own inpatient unit is most likely to provide GIP to at least one patient. To clarify the point, a smaller hospice is less likely to be recorded as providing GIP. For this reason, we evaluated, as the third dependent variable, whether a hospice was providing only routine home level of care at the time of interview. Since the third dependent variable, - the receipt of only routine home care at the time of interview, - means no GIP, no respite inpatient care, and no continuous crisis home care, it

may more accurately identify whether a hospice did not provide GIP for the entire year rather than just during the time of interview.

Characteristics of hospices we considered as associating with our dependent variables are displayed in Table 1. They include agency type (providing hospice care only versus providing mixed care (both home health and hospice care), agency basis (freestanding versus facility-based including hospital, home health, and nursing home), agency size (four categories based on the number of hospice patients being served at time of interview), number of years in operation (four categories based on the number of years between the year of first providing hospice care and the interview year), agency location (metropolitan, micropolitan, or neither), five main referral sources (physician offices, hospital, SNF, patient/family/friends, or all others), formal contracts with a residential facility, a SNF, a hospice, and a managed care or private insurance provider. A formal contract was defined as an attempt by each party to spell out all terms in a legal contract or letter of agreement. A preferred provider agreement is considered a formal contract. Lastly, we examined whether agencies offered the following services: continuous home care, respite care, and referral services. Not all of the agencies that offer a service may end up actually providing it. Referral services provide information about services available from public and private providers. Also, they may order or arrange services including GIP but do not provide the services directly.

Statistical Approach

To identify characteristics of agencies that have a formal contract with a hospital, versus not having a contract, we first conducted bivariate logistic regressions and examined their significance levels of odds ratios at 0.05. Variables that were only significantly related to contract status were included later in a multivariate analysis. As a variable selection method, we employed backward elimination and obtained a reduced model where all remaining variables are statistically significant. The dichotomous variable indicating whether a hospice did not have a formal contract with a hospital was included as a primary independent variable in the other two multivariate models - first providing GIP care and secondly providing only routine home care.

All analyses included in this study were made using SAS Survey procedures that account for the complexity of the design of the NHHCS. Furthermore, since home health care agencies were also involved in creating the NHHCS strata and sample weights, we cannot simply remove them even if our focus was exclusively on hospice agencies. Therefore, we used the DOMAIN option²⁷ to consider subgroup sample sizes as random variables for subpopulation analyses focused on mixed agencies and hospice care only agencies. By including home health care agencies as random variables, we can incorporate this variability in the parameter significance testing. All the percentages and 95% confidence intervals (CIs) reported in this study were weighted with the sample weights.

FINDINGS

Selected Hospice Characteristics

There were 676 hospice agencies included in the 2007 NHHCS, representing a national estimate of approximately 3,489 hospice agencies after applying the sample weights. Characteristics of these hospices are displayed in Table 1. In 2007, 1,119 agencies (32%) were estimated to have no contract with any hospital; 49% of these agencies without a contract with a hospital also did not have a contract with any SNF. Nearly 63% were not providing GIP care at the time of interview; 51% (1,779 hospices) were providing only routine home care to patients at the time of interview. About 40% of the agencies were home health agencies that also provided hospice care.

Having No Formal Contract with a Hospital

In the multivariate logistic model examining no formal contract with a hospital with backward variable selection (Table 2), agencies citing a hospital as the main referral source for hospice patient agencies (vs. nursing home/residential facility or patient/family, adjusted OR=3.55; 95% CI:1.37–9.21), not having a contract with a SNF (AOR=3.96; 95% CI:1.61–9.74) or a managed care or private insurance provider (AOR=4.05; 95% CI: 2.06–7.95) and agencies offering no referral services (AOR=2.76; 95% CI: 1.24–6.16) were significantly more likely to not have a contract with a hospital. The multivariate model did not include four variables that were significant in the univariate analyses but were eliminated after they became no longer significant with other variables being in the model. These variables include agencies in the bottom quartile of the hospice patient census (vs. the top quartile), mixed care agencies (vs. hospice care only agencies), facility-based agencies (vs. freestanding), not-for-profit agencies (vs. for-profit), agencies that have a contract a residential facility, and agencies that have the status of offering continuous home care. It is interesting to see that agency size in terms of hospice patient census was no longer significant. Years of operation and location of agencies (metropolitan vs. non-metropolitan) were not related to whether an agency did not have a formal contract with a hospital, even in the univariate analysis.

One seemingly puzzling finding was that agencies citing a hospital as the main referral source were more likely to not have a contract with a hospital; 41% of them had no contract with a hospital, compared to only 16% of those citing a nursing home/residential facility, or patient/family. More detailed analysis revealed that a majority of them (60%) were hospital-based hospices suggesting that they may not need a formal contract with other hospitals.

Providing Only Routine Home Care

One of our primary interests was to evaluate if not having a contract with a hospital can predict whether a hospice provided GIP. The same testing was done with facilities providing only routine home care. The two sets of results were very similar. We decided to report only results from the analysis of providing only routine home care (Table 3).

In the multivariate logistic model of provision of routine home care with backward variable selection, agencies not having a formal contract (AOR=2.36; 95% CI: 1.05–5.28) and

agencies in the second quartile of hospice patient census (12 to 29 vs. 73 or more, AOR=14.10; 95% CI: 4.26–46.62) were independently related to providing only routine home care. In the bivariate analysis, the bottom quartile was also significantly related, but its effect became no longer significant when the hospital contract variable was included in the model. In comparison, the effect of the second category of hospice size remained significant, although its effect size became smaller with the hospital contract variable included in the model.

Five more hospice characteristics were significant in the bivariate analysis, but no longer significant in the multivariate model. Mixed care agencies, not-freestanding agencies, agencies located at non-metro areas, agencies reporting physician's office as the main patient referral source, and finally agencies having no formal contract with a managed care or private insurance provider were more likely to provide only routine home care.

Two Model Outcomes

Figure 2 depicts the two model outcomes in one diagram. The diagram suggest that the reasons for providing no GIP or providing only routine home care may not only be a lack of the capacity for a hospice to do so, such as not having a contract, but also the size of patient census that can allow a hospice to spread out the GIP cost. In the bivariate analysis of providing only routine home care, the bottom quartile of hospice size was significantly related, but its effect became no longer significant when the hospital contract variable was included in the model. We speculate that the impact of the smallest category of hospice size was obscured by the greater impact of the hospital contract variable, because agencies having no contract with a hospital may also be small.

In comparison, the effect of the second category of hospice size remained significant, although its effect size became smaller with the hospital contract variable included in the model. We speculate that agencies in this category may be more likely than the smaller agencies to have a hospital contract but may be less likely than the agencies in the third or the top quartiles of hospice size to operate their own facilities. In other words, this group of agencies may rely solely on contract beds for GIP and may be reluctant to make costly GIP referrals. The diagram also suggests that instead of making two separate models, we should have made a structural equation model that can estimate all the parameters simultaneously. However, it was not feasible because of the uncommon design of the 2007 NHHCS in that the NHHCS survey included not only hospices but also home care only agencies that did not provide hospice care at all.

DISCUSSION

Our study found that as many as 32% of hospices that had hospice patients in 2007 did not have a formal contract with a hospital and half of them did not have a contract with a SNF either. These hospices cannot make a GIP referral and would have to maintain a higher than median nurse staffing level to take care of high intensity patients. It seems to be a daunting task given that these hospices are more likely to be in the bottom quartile of hospice patient censuses. They may perhaps discharge them alive or transfer them to another hospice.

Having a formal contract with a hospital is important not only for GIP provision but also for instances where a patient is transferred to a hospital for care unrelated to his terminal illness, such as acute medical events including an injury (fall), acute deterioration of a chronic condition not related to the terminal diagnosis, or development of a new condition. The patient is most likely to be discharged alive by the hospice when it has no contract with the hospital. No data is available to examine the extent to which patients are discharged alive for this reason, but the 2007 NHHCS patient-level data provides indirect evidence: more than 6% of hospice patients experienced at least one emergency situation in the past 6 months immediately before the time of survey and those with emergent events were almost four times as likely (33.3%) as those with no experience (8.4%) to be discharged alive (versus remaining with hospice until death).²⁸

Despite the importance of reasons for being discharged alive, it was not until June 2012 that the Centers for Medicare and Medicaid Services (CMS) required an agency to report reasons for disenrollment.²⁹ Prior to June 2012, CMS did not know whether the disenrollment was due to a patient's voluntary revoking, moving out of the service area, or because they were no longer terminally ill. However, even at the time of the policy change in 2012, CMS did not distinguish contract-related discharge reasons from the broader reason of "*moving out of service area.*" Given a significant portion of hospices that do not have a contract with a hospital, CMS needs to track the hospice-initiated discharges in the circumstances where the hospices are unable to manage the care of a patient when the patient was temporarily receiving GIP or treatment for a condition unrelated to the terminal illness in a facility with which the hospice does not have a contract.

Another policy recommendation is that states enforce oversight on contracts for GIP. For example, in New York where a certificate of need is required for a hospice project that establishes its own GIP beds, a hospice applicant is required to first make every effort to establish as many contracts as possible with a hospital/SNF in each county of hospice service area.³⁰ Building its own facilities and housing GIP beds is not permitted without submitting the list of contract hospitals/SNFs in the application. Nonetheless, New York does not require a list of contracted providers from hospices that *do not* apply for GIP inpatient beds. We believe that this holds true for all other states, meaning that states do not collect information on whether hospices keep contracts with local hospitals.

Our study also found that having no contract with a hospital is just one of the factors that explain variance in not providing GIP or providing only routine home care. Our multivariate analysis results show that in addition to agencies having no contract with a hospital, agencies in the second quartile of hospice size (12–29 patient census) were more likely than agencies in the top quartile to not provide GIP or provide only routine home care. This suggests that agencies in the second quartile of hospice size may have a contract with a hospital, but for some reason did not make GIP referrals. We suspect that these hospices may rely only on scatter beds and feel reluctant to make GIP referrals that are very costly. Indeed, a significant portion (41%) of hospices having a contract with a hospital was providing only routine home care on the day of survey. These hospices are most likely to rely solely on scatter beds for GIP, since hospices having a dedicated unit/freestanding facility for GIP must have provided GIP. Hospices that rely solely on scatter beds have a

strong financial incentive to provide fewer GIP days, while hospices with dedicated units or freestanding facilities have a financial incentive to provide more GIP. Despite concerns about overuse of GIP in certain groups of agencies, our finding cautions that it is important to consider underuse as well.

Limitations of our study must be noted. We focused on the presence of a contract with a hospital for GIP. However, some hospices that do not have a formal contract with a hospital may have a contract with a SNF for GIP, although a majority of hospices that have a contract with a SNF do so to provide routine home care to residents in long-term care facility portions of the SNF (many SNFs have long-term care beds as well as SNF beds). Similarly, some of the hospices with freestanding inpatient facilities may not have a need for a hospital contract for GIP care, since they can provide the inpatient care independently. Therefore, our estimate that 32% of hospices have no contract with a hospital for GIP may not be accurate if we say that all hospices without a hospital contract cannot provide GIP. A proportion of the 32% hospices can provide GIP because they do have a contract with a SNF for GIP care or have freestanding hospices. Further analyses of hospices with no hospital contract are recommended for future research.

Our estimate that 51% of hospices provide only routine home care may be exaggerated. As specified in the methods section, our overestimation occurred because NHHCS collected information on GIP provision on the day of survey, whereas OIG's reported estimate of 27% was based on the entire year (2011). This is a large discrepancy that could impact the validity of our outcome measure, as approximately half of those classified as having no GIP/providing only routine home care probably did provide at least some GIP care. Despite the limitation of our outcome measures estimated from NHHCS data, we believe that our outcome measure is adequate for our study purpose. A study based on Medicare claims for the recent two-year period of 2010–2011 reported that half of hospices provided only 0.4% of hospice care days as GIP days, or four GIP days per 1,000 hospice days. So, our measure of not providing GIP or providing only routine care based on NHHCS data is most likely to have included hospices providing limited GIP care. We believe that provision of low levels of GIP is as concerning as no GIP provision.

CONCLUSION

We empirically showed that in providing GIP it is important for hospices to have a contract with a hospital. In addition, having a contract with a hospital is important in keeping patients in need of emergent care from disenrolling from hospice by transferring them for emergent care to a contract hospital. Given that a significant portion of hospices do not have a contract with a hospice, policy makers need to consider a hospice's contract status as one of the standards for hospice certification. This study also found that not all hospices that have a contract with a hospital provide GIP. Since they are most likely to rely solely on scatter beds, they have a strong financial incentive to provide fewer GIP days. Despite concerns about overuse of GIP by hospices with dedicated units/facilities, our findings caution that it is important to consider underuse as well.

REFERENCES

1. Medicare Hospice Conditions of Participation. 42 C. F. R. Short-Term Inpatient Care (§ 418.108).
2. U.S. Department of Health & Human Services Office of Inspector General. Medicare hospice: Use of general inpatient care. 2013.
3. [Accessed August 8, 2013] U.S. Department of Health & Human Services Office of Inspector General Work Plan for Fiscal year 2011. Available at: http://oig.hhs.gov/publications/docs/workplan/2011/Work_Plan_FY_2011.pdf.
4. [Accessed Oct 1, 2013] U.S. Department of Health & Human Services Office of Inspector General. Work plan for fiscal year 2012. Available at: <https://oig.hhs.gov/reports-and-publications/archives/workplan/2012/Work-Plan-2012.pdf>.
5. [Accessed Oct 1, 2013] U.S. Department of Health & Human Services Office of Inspector General. Work plan for fiscal year 2013. Available at: <https://oig.hhs.gov/reports-and-publications/archives/workplan/2013/Work-Plan-2013.pdf>.
6. [Accessed August 2013] Centers for Medicare & Medicaid Services (CMS). Table 7: Final FY 2014 Hospice Payment Rates Updated by the Final Hospice Payment Update Percentage. http://www.ofr.gov/OFRUpload/OFRData/2013-18838_PL.pdf
7. [Accessed June 2013] Hospice of Wake County. Petition for change to the hospice inpatient bed need methodology. 2013. Available at: http://www.ncdhhs.gov/dhsr/mfp/pets/2013/lrbh/0307_howc_hospice.pdf
8. [Accessed February 5, 2013] Federal Register. Revised Interpretative Guidance for the Hospice Conditions of Participation. <https://www.federalregister.gov/articles/2013/06/27/2013-15313/medicare-and-medicaid-programs-requirements-for-long-term-care-facilities-hospice-services>
9. Centers for Medicare and Medicaid Services. Election by skilled nursing facility (SNF) and nursing facilities (NFs) residents and dually eligible beneficiaries (20.3). Medicare Benefit Policy Manual Chapter 9 - Coverage of Hospice Services Under Hospital Insurance.
10. Abt Associates. Medicare Hospice Payment Reform in Hospice Study Technical Report. Abt Associates; 2012.
11. Raffa CA. Guide for drafting a contract between a hospital and hospice for inpatient hospice services for symptom management and pain control. 2010 Available at: <http://www.capc.org/tools-for-palliative-care-programs/hospice-hospital-relationships-tools/contracts/raffa-20100818.pdf>.
12. [Accessed March 2013] Hospice & Palliative Care Federation of Massachusetts. The hospice general inpatient level of care. 2004. http://www.hospicefed.org/download/gip_report.pdf.
13. Donabedian A. The quality of care. How can it be assessed? Archives of Pathology & Laboratory Medicine. 1997; 121(11):1145–1150. [PubMed: 9372740]
14. Evans WG, Cutson TM, Steinhauer KE, Tulsy JA. Is there no place like home? Caregivers recall reasons for and experience upon transfer from home hospice to inpatient facilities. Journal of Palliative Medicine. 2006; 9(1):100–110. [PubMed: 16430350]
15. Smith AK, et al. Half of older Americans seen in emergency department in last month of life; most admitted to hospital, and many die there. Health Affairs. 2012; 31(6):1277–1285. [PubMed: 22665840]
16. Swiger H. Contracting for Inpatient Care. 2011 http://www.calhospice.org/included/docs/education/3C_Hospice_Inpatient_Care_Swiger.pdf.
17. Kitzes, JA.; Schmoll, BL.; Dixon, CE. Hospice/palliative care settings. In: Forman, WB.; Kitzes, JA.; Anderson, RP.; Sheehan, DK., editors. Hospice and palliative care: Concepts and practice. 2nd ed.. San Francisco, CA: Jones and Bartlett Publishers; 2003. p. 47-56.
18. NHPCO. Staffing guidelines for hospice home care teams. 2011 Available at: http://www.nhpc.org/sites/default/files/public/quality/Staffing_Guidelines.pdf.
19. NHPCO. Hospital -hospice partnerships in palliative care: Creating a continuum of service. A joint project of the National Hospice and Palliative Care Organization and the Center to Advance Palliative Care. 2001
20. Florida Agency for Health Care Administration. Hospice of Southwest Florida, Inc./CON #9694; State agency action report on application for certificate of need. http://ahca.myflorida.com/MCHQ/CON_FA/Batching/decisions/docs/2003-04/9692-94.pdf [Accessed August 2013]

21. Vitas. [Accessed August 2013] Locations. <http://www.vitas.com/Aboutus/Locations.aspx>
22. [Accessed October 2013] U.S. Department of Health & Human Services Office of Inspector General. Medicare could save millions by implementing a hospital transfer payment policy for early discharges to hospice care. 2013. Available at: <http://oig.hhs.gov/oas/reports/region1/11200507.pdf>
23. NHPCO. NHPCO Facts and Figures: Hospice Care in America. National Hospice & Palliative Care Organization. 2012 Available at: http://www.nhpco.org/files/public/statistics_research/2011_facts_figures.pdf.
24. Brian's House. <http://www.mclaren.org/Uploads/Public/Documents/BayRegion/documents/BRMC%20News/brianshouseinfo.pdf>.
25. Centers for Disease Control and Prevention. [Accessed October, 2013] National Home and Hospice Care Survey. Available at: <http://www.cdc.gov/nchs/nhhcs.htm>.
26. National Center for Health Statistics. Redesign and operation of the National Home and Hospice Care Survey, 2007. Vital and Health Statistics. 2010; 1(53) Available at: http://www.cdc.gov/nchs/data/series/sr_01/sr01_053.pdf.
27. Decker, FH. 2007 National Home and Hospice Care Survey (NHHCS). 2010 National Conference on Health Statistics; CDC;
28. Caffrey C, Sengupta M, Moss A, Harris-Kojetin L, Valverde R. Home health care and discharged hospice care patients: United States, 2000 and 2007. National Health Statistics Reports. 2011:38.
29. Centers for Medicare & Medicaid Services (CMS). [Accessed August 2013] CR 7677 – Hospice Condition Code. <http://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/downloads/R2410CP.pdf>.
30. New York State Department of Health. [Accessed August 2013] Schedule 22 Article 40 - Hospices. http://www.health.ny.gov/facilities/cons/more_information/schedules.htm

Figure 1.
Conceptual Model: Application of the Donabedian Model

Figure 2.
The Model Outcomes

Table 1**Characteristics of Hospice Agencies that Provided Hospice Care in 2007**

Agency Characteristics	N=676	Weighted %	Lower 95% CI	Higher 95% CI
<u>Outcome Measures</u>				
Did not provide GIP	400	63.25	56.13	70.37
Provided only routine	333	50.67	42.98	58.37
Did not have a formal contract with a hospital	205	32.07	24.49	39.66
<u>Agency Types</u>				
Mixed care (vs. Hospice only care)	324	40.04	33.34	46.74
Freestanding (vs. not freestanding)	351	57.94	50.63	65.25
For-profit (vs. non-for-profit or government)	148	35.37	27.62	43.11
<u>Number of Current Hospice Patients</u>				
1 to 11	162	18.60	13.73	23.47
12 to 29	172	27.49	20.24	34.73
30 to 72	175	29.81	21.86	37.75
73 or over	167	24.10	18.64	29.57
<u>Years of Hospice Operation</u>				
1 to 8	132	35.42	26.92	43.92
9 to 14	177	22.39	17.50	27.28
15 to 22	148	13.47	9.55	17.39
23 or over	198	28.73	21.56	35.89
<u>Location of Agency</u>				
Metropolitan	232	65.72	60.74	70.71
Micropolitan	252	20.61	17.05	24.17
Neither	192	13.67	11.31	16.04
<u>Main patient referral source for hospice care</u>				
Hospital	244	35.95	28.31	43.59
Physician's office	326	46.10	38.41	53.79
Nursing home, Patient, all others	104	17.95	11.89	24.00
<u>Do not Have Formal Contracts (vs. have contracts)</u>				
Residential Facility	367	52.71	44.88	60.53
SNF	154	21.84	15.21	28.47
Hospice	585	83.58	77.45	89.70
Nanaged care or private insurance provider	343	46.89	39.18	54.60
<u>Do not Offer Services (vs. offer services)</u>				
Continuous home care	195	28.72	21.53	35.91
Respite care	59	8.05	4.66	11.45
Referral services	161	26.17	18.90	33.44

Source: the 2007 NHHCS

Table 2

Multivariate Logistic Model of Having No Formal Contract with a Hospital

Agency Characteristics	Weighted %		Unadjusted OR (95% CI)*	Adjusted OR (95% CI)*
	No contract (N=193)	Contract (N=443)		
<u>Agency Type</u>				
Mixed Care	48.53	51.47	3.82 (1.81, 8.07)	3.48 (1.73, 702)
Hospice care only	21.08	78.92	1.00	1.00
<u>Agency Basis</u>				
Not freestanding	46.56	53.44	3.02 (1.44, 6.33)	
Freestanding	21.57	78.43	1.00	
<u>Ownership</u>				
Not for-profit	38.45	61.55	2.36 (1.04, 5.31)	
For-profit	20.42	79.58	1.00	
<u>Number of Current Hospice Patients</u>				
1 to 11	50.69	49.31	5.04 (1.84, 13.79)	
12 to 29	37.75	62.25		
30 to 72	26.73	73.27		
73 or over	17.84	82.16	1.00	
<u>Main patient referral source for hospice care</u>				
Hospital	41.20	58.80	4.08 (1.59, 10.44)	3.55 (1.37, 9.21)
Physician's Office	31.38	68.62		
NH, Patient, all others	16.03	83.97	1.00	1.00
<u>Formal contract with Residential Facility</u>				
No	43.18	56.82	3.22 (1.39, 7.47)	
Yes	19.70	80.30	1.00	
<u>Formal contract with SNF</u>				
No	63.12	36.88	5.14 (2.08, 12.69)	3.96 (1.61, 9.74)
Yes	23.40	76.60	1.00	1.00
<u>Formal contract with a managed care or private insurance provider</u>				
No	48.84	51.16	4.33 (1.85, 10.13)	4.05 (2.06, 7.95)
Yes	17.27	82.73	1.00	1.00
<u>Offer Continuous Care</u>				
No	50.40	49.60	3.05 (1.38, 6.72)	
Yes	24.69	75.31	1.00	
<u>Offer Referral Services</u>				
No	55.75	44.25	5.16 (2.37, 11.23)	2.76 (1.24, 6.16)
Yes	23.68	76.32	1.00	1.00

Source: the 2007 NHHCS Survey

* Odds ratio and 95% CI are reported only when they are significant at 0.05.

Table 3

Multivariate Logistic Model of Providing Only Routine Home Care

Agency Characteristics	Weighted %		Unadjusted OR (95% CI)*	Adjusted OR (95% CI)*
	Only Routine (N=343)	Other levels (N=333)		
<u>Contract With a Hospital</u>				
No	66.76	33.24	3.03 (1.48, 6.19)	2.36 (1.05, 5.28)
Yes	41.10	58.90	1.00	1.00
<u>Agency Type</u>				
Mixed Care	63.49	36.51	3.13 (1.68, 5.84)	
Hospice care only	39.87	60.13	1.00	
<u>Agency Basis</u>				
Not freestanding	59.71	40.29	2.15 (1.09, 4.23)	
Freestanding	41.81	58.19	1.00	
<u>Number of Current Hospice Patients</u>				
1 to 11	63.48	36.52	13.24 (3.80, 46.27)	
12 to 29	68.40	31.60	18.05 (4.77, 68.28)	14.10 (4.26, 46.62)
30 to 72	52.88	47.12		
73 or more	12.25	87.75	1.00	1.00
<u>Location of Agency</u>				
Micropolitan	63.28	36.72	2.55 (1.38, 4.71)	
Neither	71.07	28.93	3.73 (1.98, 7.05)	
Metropolitan	40.43	59.57	1.00	
<u>Main patient referral source for hospice care</u>				
Hospital	46.56	53.44		
Physician's Office	57.64	42.36	3.05 (1.41, 6.62)	
NH, Patient, all others	32.53	67.47	1.00	
<u>Formal contract with a managed care or private insurance provider</u>				
No	58.50	41.50	2.03 (1.04, 3.96)	
Yes	41.23	58.77	1.00	

Source: the 2007 NHHCS Survey

* Odds ratio and 95% CI are reported only when they are significant at 0.05.