Fiscal Impact of Inpatient Palliative Care: Rationale and Prerequisites

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The primary purpose of inpatient palliative care (IPPC) is to improve care for people with serious illness by providing an additional layer of support for patients, families, and hospital staff dealing with challenging circumstances; reducing pain and other symptoms; and improving communication about prognosis and clarifying goals of care. Another benefit of IPPC is that it often reduces the costs of hospital care. According to a recent meta-analysis, IPPC consultation was associated with an average reduction of 28% ($3,237) in hospitals' direct cost of care per hospital stay.[1] That study analyzed data on more than 130,000 hospitalizations from 10 community and academic hospitals, capping two decades of research on hospital-based palliative care.

This document describes why IPPC has a positive financial impact for hospitals and introduces the prerequisites for quantifying that impact. Detailed guidance for each analysis is also available.

Rationale: How Does Inpatient Palliative Care Reduce Hospital Costs?

There are several ways in which IPPC consultations affect the course and cost of care during a hospitalization and after discharge. Common scenarios are described below.

- Most hospitalizations for seriously ill patients (those with advanced cancer, advanced heart disease, etc.) begin in the emergency department (ED), where critical decisions are made about whether to admit the patient and what the goals of admission are. Initial PC consultation in the ED with a seriously ill patient and family helps to clarify the patient's wishes, treatment options, and goals of care, given their disease trajectory and prognosis. Such conversations open the door to multiple alternative care paths such as supporting the patient at home with hospice services rather than admitting to the hospital, initiating comfort care orders for the hospital stay, and introducing the idea of time-limited trials of high-intensity interventions. These effects of an early PC consult could reduce the length and cost of the admission in many cases.[2]
- After admission, the first few days of a hospital stay are when further critical decisions are made about treatment options, goals of care, and a care plan. Initial PC consultation during these early days of a hospitalization — for example, in the intensive care unit (ICU) if that was where the patient was admitted to from the ED — can have a similar clinical (and thus financial) impact as described above for the remainder of the hospitalization.[3]
- Even when the palliative care team is engaged later in a hospitalization — for example, on Day 8 — the consultation can result in clarification of the patient's goals that may lead to a reduction in unwanted high-intensity treatment during the remainder of the hospital stay, reducing the costs of each remaining day in the hospital.[4]
- Palliative care at any point in a hospital stay can have an impact on what happens after hospital discharge. If outpatient or home-based PC is available, referral to those services can continue the provision of palliative supports in subsequent weeks and months. Alternatively, for patients

nearing the end of life, inpatient PC consults can help facilitate hospice enrollment for patients who prefer that option. These kinds of choices could reduce hospital readmissions[5] and reduce the intensity and cost of any subsequent admissions that do occur.[6]

It is possible to quantify the fiscal effects of inpatient PC involvement from each of the scenarios above, and other available resources will guide you through those analyses. In addition, some indirect or implied fiscal impacts may also occur but would be difficult to quantify. As Dr. Daniel Cox described in *Making the Case for Inpatient Palliative Care*, palliative care can improve the work life of physicians, nurses, and others in the hospital, potentially reducing burnout and moral distress. This happens because PC teams help other treating clinicians with difficult tasks such as delivering bad news; leading family meetings about prognosis and goals of care; helping to avoid drawn-out, burdensome, futile care; and facilitating staff debriefings after difficult cases or deaths. While supporting other providers may have an economic impact (for example, improved retention can save costs of recruiting and training new staff), quantifying such contributions would be extremely difficult and is usually not necessary. However, even without fiscal analyses of these types of contributions, the benefits for other providers and staff should be mentioned when making the case for supporting your inpatient PC service.

Preparing to Evaluate Fiscal Impacts

Health systems can conduct four analyses to estimate the actual or potential fiscal impact of an IPPC service:

1. Analysis #1: An evaluation of the costs and hospital length of stay, comparing cases where PC was involved **within the first three days of a hospital stay** to matched controls where PC was not provided.
2. Analysis #2: An evaluation of the **costs per day before and after PC consultation**, for cases where PC was involved later in the stay (Day 3 or later).
3. Analysis #3: A validating analysis of the **costs in the final days** of stay for inpatient deaths, comparing cases where PC was involved to those where it wasn't.
4. Analysis #4. An inpatient palliative care "opportunity analysis" that estimates the **potential reach and impacts** of an IPPC service.

Detailed descriptions of how to conduct these analyses, and guidance on when each should be used, are also available. Before attempting any of these analyses, the following preparatory steps are needed.

1. **Put fiscal outcomes in proper context.** Collect information on clinical outcomes and patient/family experience of those receiving IPPC, either before or concurrently with evaluating financial outcomes. This broader context is useful for interpreting fiscal outcomes and reinforces the importance of patient-centered outcomes.
2. **Determine timing of PC involvement.** Assess how many of your IPPC consults occur in the ED, in the first three days of hospitalization (post-ED), or later, since different analyses are appropriate depending on the timing of PC consultation relative to the hospital admission date.
3. **Determine which patients might demonstrate posthospitalization impacts of IPPC.** If you are interested in the postacute effects of IPPC involvement (such as fewer readmissions), review the discharge disposition for patients seen by the IPPC, identifying which patients are discharged to

hospice, outpatient palliative care, or home-based palliative care — services that can continue the palliative plan of care and thus reduce preventable or nonbeneficial hospitalizations.

4. **Acquire data and engage analytic support.** Any analyses of the fiscal impacts of inpatient palliative care have these requirements:

   - A unique Identifier (such as a medical record number) for patients who had IPPC consults, and the date of initial consult.
   - Hospitalization data that describe admission date, discharge date, costs, reimbursement, insurance type, ICU days, discharge disposition, etc.
     - Most research has used "direct costs," which exclude overhead. Your hospital leadership or stakeholders may ask for something more specific such as "direct variable costs," which exclude overhead and fixed costs. If these cost data are not available, total costs can be inferred from hospital charges and the Medicare charge-to-cost ratio for your hospital. The portion of total costs derived from direct or direct variable costs can then be estimated.
   - Ability to link PC data and hospital data. In some hospitals, the PC consultation information already resides within the hospital data systems that have the necessary administrative and cost data. In others, PC data are stored separately, and the data sets must be linked or merged.
   - Time to develop clinical-financial savvy. Palliative care clinicians usually do not know much about the details of hospital cost-accounting and data systems; financial analysts usually do not focus on the kinds of analyses needed to assess the fiscal impact of PC. The two need to partner and talk about both the business case for palliative care, the availability of data, the goals of these analyses, and iterative review of output from the analyses.
   - In addition to these prerequisites for all analyses, certain kinds of analyses have additional requirements:
     - To analyze costs per day, you need data that describe actual costs associated with each hospital day. This is *not* an average per-day cost derived from dividing the cost of the whole stay by the length of stay. It is the *actual* cost of services and materials used on each day of the stay.
     - To describe impact on postacute costs, you need information about the discharge disposition of patients seen by the palliative care team who survive the hospitalization.

Before beginning, consider which data are available and how difficult those data are to acquire. If the data needed to conduct economic analyses would be especially difficult to acquire, or if there are serious questions about the accuracy and completeness of the data, you will need to re-assess your plans, perhaps relying on outcomes in the published literature or from another public hospital site to estimate the impact of your service.

Endnotes

[1] Peter May et al., "Economics of Palliative Care for Hospitalized Adults with Serious Illness: A Meta-Analysis," *JAMA Internal Medicine* 178, no. 6 (June 1, 2018): 820–29.

[2] Jennifer G. Wilson et al., "End-of-Life Care, Palliative Care Consultation, and Palliative Care Referral in the Emergency Department: A Systematic Review," *Journal of Pain and Symptom Management* 59, no. 2 (Feb. 2020): 372–83.e1.

[3] Peter May et al., "Cost Analysis of a Prospective Multi-Site Cohort Study of Palliative Care Consultation Teams for Adults with Advanced Cancer: Where Do Cost-Savings Come From?," *Palliative Medicine* 31, no. 4 (Apr. 1, 2017): 378–86; and Peter May et al., "Economics of Palliative Care."

[4] R. Sean Morrison et al., "Cost Savings Associated with US Hospital Palliative Care Consultation Programs," *Archives of Internal Medicine* 168, no. 16 (Sept. 8, 2008): 1783–90; and R. Sean Morrison et al., "Palliative Care Consultation Teams Cut Hospital Costs for Medicaid Beneficiaries," *Health Affairs* (Millwood) 30, no. 3 (Mar. 2011): 454–63.

[5] Peter May et al., "Evaluating Hospital Readmissions for Persons with Serious and Complex Illness: A Competing Risks Approach," *Medical Care Research and Review* 77, no. 6 (Dec. 1, 2020): 574–83.

[6] Glenn Gade et al., "Impact of an Inpatient Palliative Care Team: A Randomized Controlled Trial," *Journal of Palliative Medicine* 11, no. 2 (Mar. 11, 2008): 180–90.