Palliative Care Clinics: Evaluating Opportunities and Projecting Possible Fiscal Impact

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There are several ways to quantify the need for and potential impact of outpatient (clinic-based) palliative care (PC). Such information can be used to either start a new clinic-based service or to support expansion of an existing service. Some methods are very data-intensive and others are less so, but all have similar goals and logic:

Produce two estimates from the current state:

- How many patients with serious illnesses (advanced cancer, advanced heart failure, etc.) could benefit from outpatient palliative care?
- How many hospitalizations did those patients have in the months before death and, if needed, what do such hospitalizations cost?

Make one projection of the future state:

- Project low, medium, and high estimates of impact that this service could have, such as the number of hospitalizations avoided and the cost of those admissions.

Four Analytic Approaches

Four possible approaches for quantifying the need for and potential impact of OPPC are briefly described here:

- **Interview key informants.** Brief interviews with physicians, nurses, and others can help you estimate the number of patients who might be eligible for an outpatient service, but probably will not help you project impacts on utilization and costs.
- **Review charts.** If key informants can provide examples of specific patients who they think would have benefited from a PC clinic, chart reviews can help to quantify how often such patients are hospitalized and if some of those hospitalizations could have been avoided.
- **Extrapolate from inpatient analyses.** This analysis begins by identifying patients who were appropriate for inpatient palliative care, and then looks backward in their data or charts to quantify their hospital utilization over time and examines what could have been improved.
- **Conduct in-depth analyses and projections.** If analytic resources are available, thorough analyses of serious illness populations and their average use of health services in the latter months of life can be used for a data-based projection of referrals, clinic use, and impact.

Interview Key Informants

Interview the physicians, advance practice providers, nurse navigators, and other care team leaders in each clinical area of interest (e.g., oncology, cardiology, hepatology) to get their thoughts on the volume of patients who have advanced disease and may benefit from outpatient palliative care. Provide very clear descriptions of the clinical criteria that fit your proposed clinic — for examples, see the criteria for

several serious illnesses for community-based palliative care.[1] Ask the clinicians to think of patients who met those criteria and to estimate how many of them are usually seen in a given month. Also, ask them to list those patients' names so you can review their charts for further information.

The advantages of this approach are that it does not require any data analytic work, it begins to "socialize" the idea of outpatient palliative care with the potential referring clinicians, and it focuses on real people whose clinical histories and opportunities for engagement can be described.

The main disadvantage of this approach is that it requires clinicians to guess how many patients meet certain criteria, which may be difficult. Also, it does not estimate the current rate of hospitalization among those patients, which is crucial for estimating the potential impact of the PC clinic.

Review Charts

Whether identified through interviews with clinicians (above) or through data analyses (below), chart reviews help to paint a more complete picture of patients in need of palliative care. Collect and summarize information such as patients' demographic characteristics, clinical needs, symptoms, as well as number of emergency department (ED) visits, number of recent hospitalizations, and the length and reasons for those hospitalizations, in a given time period (the prior three months, for example.)

This method can produce an average number of ED visits and hospital stays for patients who *could* have met palliative care clinic referral criteria. It does not, however, provide an estimate of how many patients *would* have met criteria.

Extrapolate from Inpatient Analyses

Inpatient data can be used to quantify hospitalizations near or at the end of life for people with serious illness and the number of unique patients with such hospitalizations. Specific steps are described below:

1. Query the data for hospitalizations that ended in death, or where patients were discharged to hospice or had a high risk of mortality — detailed instructions for such analyses can be found in *Evaluating Baseline Opportunities, Program Reach, and Further Opportunities* (PDF).
2. Next, find the unique patients who had such hospital stays — some patients may have had more than one — and which one was their final stay (either a stay that ended in death or the final admission for other high-risk patients in the analysis population). That provides a quick estimate of the number of people in a given year who may have been appropriate for outpatient palliative care earlier in their disease trajectory.
3. Finally, determine how many hospitalizations (of any type) those patients had in the six months leading up to their final hospital stay, and sum lengths of stay and costs, use of ICU beds, and other information that would be useful.

Once you have information about the average number of hospitalizations for seriously ill patients who might use a PC clinic (estimated from chart reviews or analysis of inpatient data, the two types of analyses described above) you can project what impact outpatient PC would have. Two studies of clinic-based palliative care found about a 25%–50% reduction in utilization in the final month of life when cancer patients started to receive outpatient palliative care at least three months before death.[2] Based on those findings, it would be reasonable to use 20%, 35%, and 50% reductions in number of

hospitalizations (or costs of care) as low, medium, and high projections of your clinic's potential impact in the final one to three months of life.

Conduct Comprehensive Analyses

The fourth approach is the most data-intensive and requires several technical steps described in detail in a separate resource, *Technical Document: Detailed Instructions for Conducting the Opportunity Analysis and Using the Supportive Care Calculator*. A brief overview is provided here.

The Opportunity Analysis (OA) is a very detailed assessment of utilization patterns of former patients with a serious, life-limiting disease in an advanced stage. The findings are entered into template tables (OA Table 1 and OA Table 2) and into the Supportive Care Calculator, all of which are included in this set of resources.

While some steps and outputs may be skipped, the value of conducting the full analysis includes:

- Inclusion of patients who died outside the hospital
- Careful grouping of patients into disease groups such as cancer, heart failure, and chronic obstructive pulmonary disease
- Detailed assessment of patients' end-of-life ED and hospital utilization for each disease group
- Degree to which inpatient palliative care and hospice referrals are used currently, and their timing before death
- Month-by-month utilization details for the final six months of life, including auto-generated graphs
- Interactive calculations of potential clinic volumes and staffing costs
- Projections of possible impact on utilization and costs

Throughout the technical document, instructions are provided not only for the most rigorous and comprehensive approach, but also alternative approaches that require less time, data acquisition, and analysis.

Figure 1 and Figure 2 provide two examples of the outputs and show the unique value of the comprehensive analyses.

Figure 1. Sample Output from Comprehensive Analysis

Stats per Year, from Decedents' Final 6 Months	ALS/ Dementia	Cancer	Heart Failure	Cirrhosis / Liver Failure	COPD	Kidney Disease
Unique Patients Dying	76	992	166	158	72	99
Deaths in Hospital	6	187	54	50	15	23
ED Visits	38	770	234	179	97	107
Hospital Admissions	37	1,024	251	219	71	98
Inpatient Bed Days	314	8,480	2,756	1,605	525	954
30-Day Re-admits	11	315	88	77	21	31
30-Day Mortality Admits	12	381	80	84	24	32
Avg. Health System Costs per Patient	$14,223	$31,183	$54,346	$34,061	$23,905	$36,630

Source: Author summary of sample data using Opportunity Analysis (OA) Table 1, CHCF.

Figure 2. Sample Output from Month-by-Month Analysis

Average LOS per Admission Increases over Last Six Months of Life
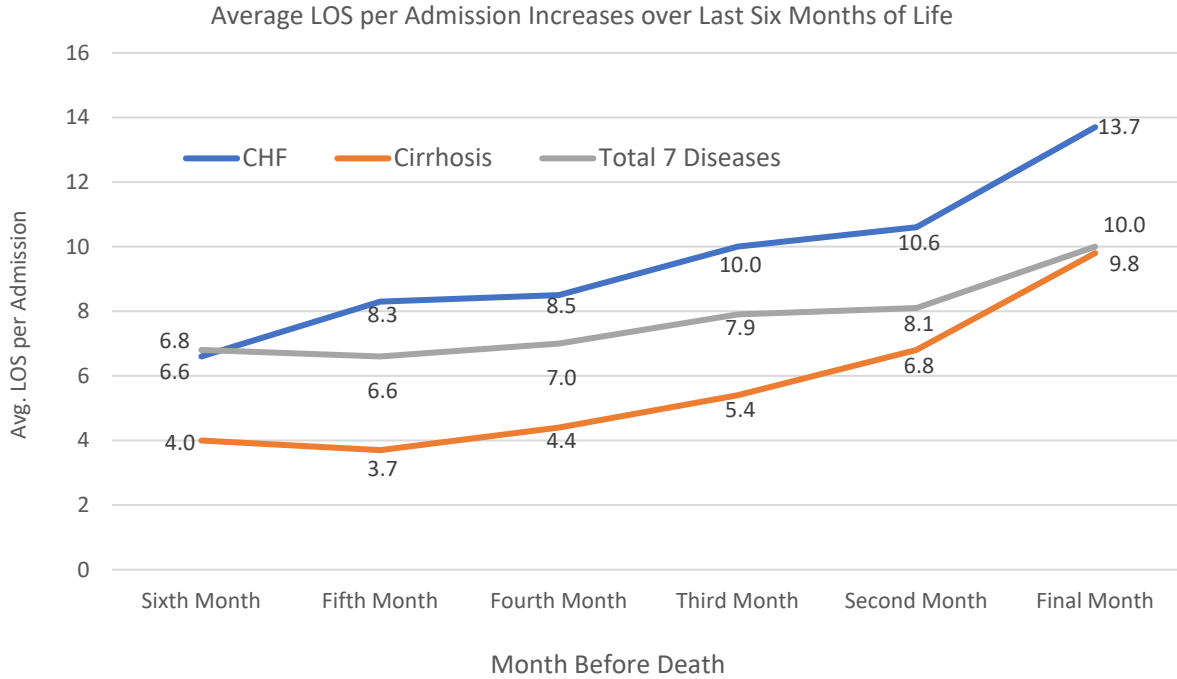
Source: Author summary of sample data using Opportunity Analysis (OA) Table 2, CHCF.

Choosing Your Approach

The four analytic approaches described above require different kinds of effort and resources, and produce information that differs in completeness, detail, and rigor (Table 1). Hybrid approaches that mix and match aspects of these are also possible.

Table 1. Four Ways of Estimating Volume and Projecting Fiscal Impact

Approach	Time and Resources Required	Information Produced
Interviews	10–15+ hours for conducting 10+ interviews, plus 3 hours for summarizing conclusions and implications	Clinicians' estimates of the number of referrable patients and names of patients for subsequent chart reviews
Chart Reviews	30–40+ hours for reviewing and summarizing 20+ charts, plus 3 hours for summarizing conclusions and implications	Description of referrable patients' history, physical condition, social history and resources, symptoms, comorbidities, ED visits, and hospital admissions
Extrapolating from Inpatient Analyses	10–25+ hours for data analysts to conduct inpatient analyses, plus 3 hours for summarizing conclusions and implications	Data-derived descriptions of patients with near end-of-life hospitalizations and their prior ED and hospital use

Approach	Time and Resources Required	Information Produced
In-Depth Opportunity Analysis and Use of Supportive Care Calculator	150–300 hours to acquire and integrate death data from external sources, conduct multilevel analyses, put initial results into table templates and the calculator, review scenarios generated, plus 5+ hours for summarizing conclusions and implications. (Possible alternatives for a less resource-intensive approach are provided.)	Detailed evaluation of the month-by-month use of ED and hospital for decedents with target conditions (cancer, heart failure, etc.) and low, medium, and high projections of potential volumes and fiscal impact of outpatient PC. Integrates estimates of staffing and clinic space needed.

Source: Developed by authors.

Conclusions

This document describes various ways to estimate the potential volume for a palliative care clinic, and to project possible operational and financial impacts. Choosing which route to take will depend on the time and resources available, and the expectations of those who will make decisions about staffing, clinic space, and other resources. You can also choose to combine approaches, such as inpatient analyses plus some chart reviews, interviews, or both. Information derived from multiple sources and methods helps to validate conclusions. Ultimately, you should strive to balance the information you need with the resources necessary to produce that information so that you do not spend too much time in these analysis and planning steps.

Endnotes

[1] [Transitions Program Guidelines: Chronic Illness Management](#) (PDF), Sharp HealthCare, last revised 2020; and Nathan Nau (chief, Managed Care Quality and Monitoring Div., California Dept. of Health Care Services) to all Medi-Cal managed care plans, [All Plan Letter 18-020](#), December 7, 2018, 3–5.

[2] Colin Scibetta et al., "[The Costs of Waiting: Implications of the Timing of Palliative Care Consultation Among a Cohort of Decedents at a Comprehensive Cancer Center](#)," *Journal of Palliative Medicine* 19, no. 1 (Jan. 2016): 69–75; and J. Brian Cassel et al., "Early Palliative Care for Patients with Solid Tumors and Hematological Malignancies: Impact on Quality Metrics and Costs of Care," *Supportive Care in Cancer* 25, no. S2 (Apr. 22, 2017): 185.