

Original Article

Palliative Care Services in California Hospitals: Program Prevalence and Hospital Characteristics

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Abstract

Context. In 2000, 17% of California hospitals offered palliative care (PC) services. Since then, hospital-based PC programs have become increasingly common, and preferred practices for these services have been proposed by expert consensus.

Objective. We sought to examine the prevalence of PC programs in California, their structure, and the hospital characteristics associated with having a program.

Methods. A total of 351 acute care hospitals in California completed a survey that determined the presence of and described the structure of PC services. Logistic regression identified hospital characteristics associated with having a PC program.

Results. A total of 324 hospitals (92%) responded, of which 44% ($n = 141$) reported having a PC program. Hospitals most likely to have PC programs were large nonprofit facilities that belonged to a health system, had teaching programs, and had participated in a training program designed to promote development of PC services. Investor-owned sites (odds ratio [OR] = 0.08; 95% confidence interval [CI] = 0.03, 0.2) and city/county facilities (OR = 0.06; 95% CI = 0.01, 0.3) were less likely to have a PC program. The most common type of PC service was an inpatient consultation service (88%), staffed by a physician (87%), social worker (81%), chaplain (76%), and registered nurse (74%). Most programs (71%, $n = 86$) received funding from the hospital and were expected to meet goals set by the hospital or health system.

Conclusions. Although the number of hospital-based PC services in California has doubled since 2000, more than half of the acute care hospitals still do not provide PC services. Developing initiatives that target small, public, and investor-owned hospitals may lead to wider availability of PC services. J Pain Symptom

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Key Words

Prevalence, structure, palliative care services, hospital

Introduction

The National Quality Forum and the Institute of Medicine recommend that hospitals provide palliative care (PC) programs that address the needs of patients with serious and life-threatening illness and their families.¹ In 1998, only 7% of hospitals in the United States had PC programs.² By 2008, the number had increased to nearly 60%, with the highest prevalence of programs in hospitals with more than 300 beds (81%).³ In 2000, a survey examining all California hospitals' PC services in more detail found that 17% of hospitals had a PC consultation service and only 6% had an inpatient PC unit.⁴ Almost 20% had an outpatient hospice service affiliated with the hospital and 74% offered bereavement services. Half of the PC services were funded exclusively by the hospital.⁴ Given the increased prevalence of PC services nationally, the purpose of this study was to provide an updated detailed picture of PC programs in California, including prevalence, types of services provided, staffing, and funding sources. This information is critical to guiding further development of hospital-based PC programs, understanding norms of practice, and designing and evaluating the effectiveness of current and future initiatives to promote and advance PC in California and across the nation.

Methods

Hospitals

Using data from the California Office of Statewide Health Planning and Development (OSHPD), we identified 351 acute care hospitals that would be expected to have a PC program. We excluded 28 rehabilitation, specialty (cardiology, orthopedic), and psychiatric hospitals that would not be expected to provide PC services.

Survey

Survey items were updated from a previous survey assessing PC services in California hospitals.⁴ The survey included items that described the type of PC service provided at each hospital, using precise definitions as described in Table 1. A hospital was designated as having a PC program if it offered at least one type of PC service. The survey asked about the characteristics of each service, including when it was established, funding sources, disciplines represented, and specialty board certification status of physicians and nurses who staff the service. Descriptive data about each hospital as reported by OSHPD also were collected, including number of licensed beds and location (urban or rural). We noted whether a hospital belonged to a system, defined as including three or more hospitals; if the site hosted a residency training program (as reported by the National Residency Matching Program); and, based on records we kept of attendees, if the hospital had participated in a training program (such as the California Hospital Initiative in Palliative Services [CHIPS] or Palliative Care Leadership Center [PCLC]) designed to assist hospitals establish PC services.

The survey was administered using a Web-based format and structured using "skip logic" so that respondents were asked to answer only those questions that pertained to their institution. The University of California, San Francisco Committee on Human Research approved the study.

Procedure

The National Health Foundation (NHF) administered the survey with the support of the three hospital councils in California: the Hospital Council of Northern and Central California, the Hospital Association of Southern California, and the Hospital Council of

Table 1
Operational Definition of PC Services Used in Survey

Type of Service	Definition
1. Inpatient consultation service	An interdisciplinary team that identifies needs, makes treatment recommendations, and facilitates patient and/or family decision making, for patients with life-threatening illness and their families. The PC team sees patients and makes care recommendations but does not assume primary responsibility for the patient.
2. Dedicated inpatient PC unit	A physically distinct unit for the exclusive use of patients who are receiving PC
3. Flex beds	Beds that have been designed for and are preferentially made available to PC service patients but can be occupied by any acute care patient
4. A primary PC service	An interdisciplinary team that identifies needs, makes treatment recommendations, and facilitates patient and/or family decision making for patients with life-threatening illness and their families. The patients are admitted to the PC team, which has primary responsibility for the patient.
5. Inpatient hospice beds	No further specific definition provided
6. Subacute setting PC service	A PC consultation service that sees patients in subacute care settings (e.g., nursing homes, rehabilitation, etc.)
7. An outpatient PC clinic or service	No further specific definition provided
8. A palliative home care service (distinct from a hospice home care program)	No further specific definition provided

San Diego and Imperial Counties. NHF sent e-mails to each hospital's chief executive officer (CEO) and the identified PC leader (if applicable) within each hospital. The e-mails were addressed from the CEO of the respective hospital council, introduced the survey, and requested that they or the person most knowledgeable about their hospital's PC services, such as the PC program director, Director of Social Services, or chief nursing officer, complete the survey.

For those hospitals that did not complete the survey after the first e-mail, staff at each of the hospital councils or at the NHF telephoned the assistants of the CEOs to encourage the hospital to participate. In addition, for the three months after distribution of the first invitation, the NHF sent up to three e-mail reminders and made up to three telephone calls to those institutions that had not completed the survey, after which the institution was considered nonresponsive. Hospitals with incomplete surveys were contacted by the NHF by e-mail or telephone and asked to complete their survey. Information about the respondents was kept confidential and separate from responses about the PC services.

Analysis

Descriptive statistics (frequencies, mean, median, and standard deviation [SD]) were

used to examine the distribution of measures. Chi-squared (χ^2) analyses were used to test for bivariate associations between the presence of PC services and hospital characteristics. Based on previous research, we hypothesized that hospital size, type, system affiliation, teaching status, and participation in a training program would be associated with having a PC program. To identify which hospital characteristics were independently associated with having a PC service, we performed logistic regression and included in the model independent variables that were significant at a P value ≤ 0.05 in bivariate analyses. The Statistical Package for the Social Sciences (SPSS) for Mac (version 17; SPSS, Inc., Chicago, IL) was used to analyze these data.

Results

Hospital Characteristics

A total of 324 surveys were returned from the 351 acute care hospitals in our sample, resulting in a 92% response rate. Hospital size ranged from 10 beds to 1022 beds, with a mean size of 220 beds (median 180, SD 159). Most hospitals were nonprofit (62%, $n = 200$), half ($n = 165$) reported having a system affiliation, and 18% ($n = 58$) were teaching sites. There were no significant differences between responding hospitals and nonresponding hospitals in terms of

bed size ($\chi^2 = 0.5$, $P = 0.8$), type of ownership ($\chi^2 = 1.7$, $P = 0.6$), system affiliation ($\chi^2 = 3.1$, $P = 0.08$), or teaching status ($\chi^2 = 0.2$, $P = 0.7$).

Prevalence of PC Services

A total of 141 (44%) hospitals had a PC program, defined as offering any type of PC service, and the mean period of time that the PC program had been in place was 4.5 years (median 4.0 years, SD 4.6, range 1–29 years). Hospitals with 300 beds or more were significantly more likely ($\chi^2 = 41.9$, $P = 0.001$) to have a PC program (69%, $n = 62$) when compared with smaller hospitals (Table 2). PC programs were more likely to be available in hospitals that were non-profit (61.5%, $n = 123$), and investor-owned facilities (9%, $n = 6$) were least likely to offer PC services. Hospitals with a PC program were more likely to be a teaching site ($\chi^2 = 26.9$, $P = 0.001$); to have a system affiliation ($\chi^2 = 34.5$, $P = 0.001$); or to have attended a training program to develop PC services ($\chi^2 = 51.6$, $P = 0.001$).

Logistic regression analysis identified that the strongest predictor for having a PC program was having attended a training program focused on the development of a PC program (odds ratio [OR] = 4.6; 95% confidence interval [CI] = 2.3, 9.2), followed by being affiliated with a system (OR = 3.2; 95% CI = 1.7, 5.9), having 300 or more beds (OR = 3.2; 95% CI = 1.4, 7.4), and being a designated teaching hospital (OR = 3.1; 95% CI = 1.2,

8.0). Hospitals that were less likely to have a PC program were those that were investor owned (OR = 0.1; 95% CI = 0.04, 0.3) or owned by the city/county (OR = 0.05; 95% CI = 0.01, 0.3).

Types of PC Services Provided

Fig. 1 provides an overview of the components of the PC programs at various hospitals. Of those hospitals that offered detailed data on the components of their PC programs ($n = 121$, 86% of hospitals reporting programs), the most common type of service was an inpatient consultation service (88% [$n = 107$] of hospitals with a program, 33% of all respondents [$107/324$]), followed by a consultation service that sees patients in subacute care settings (25% [$n = 30$] of hospitals with a program, 9% of all respondents [$30/324$]), or an outpatient PC clinic (22% [$n = 27$] of hospitals with a program, 8% of all respondents). A small number of hospitals reported having a dedicated inpatient PC unit (3% [$n = 4$] of hospitals with a program, 1% of all respondents) or a primary PC service (3% [$n = 4$] of hospitals with a program, 1% of all respondents).

Staffing of PC Programs

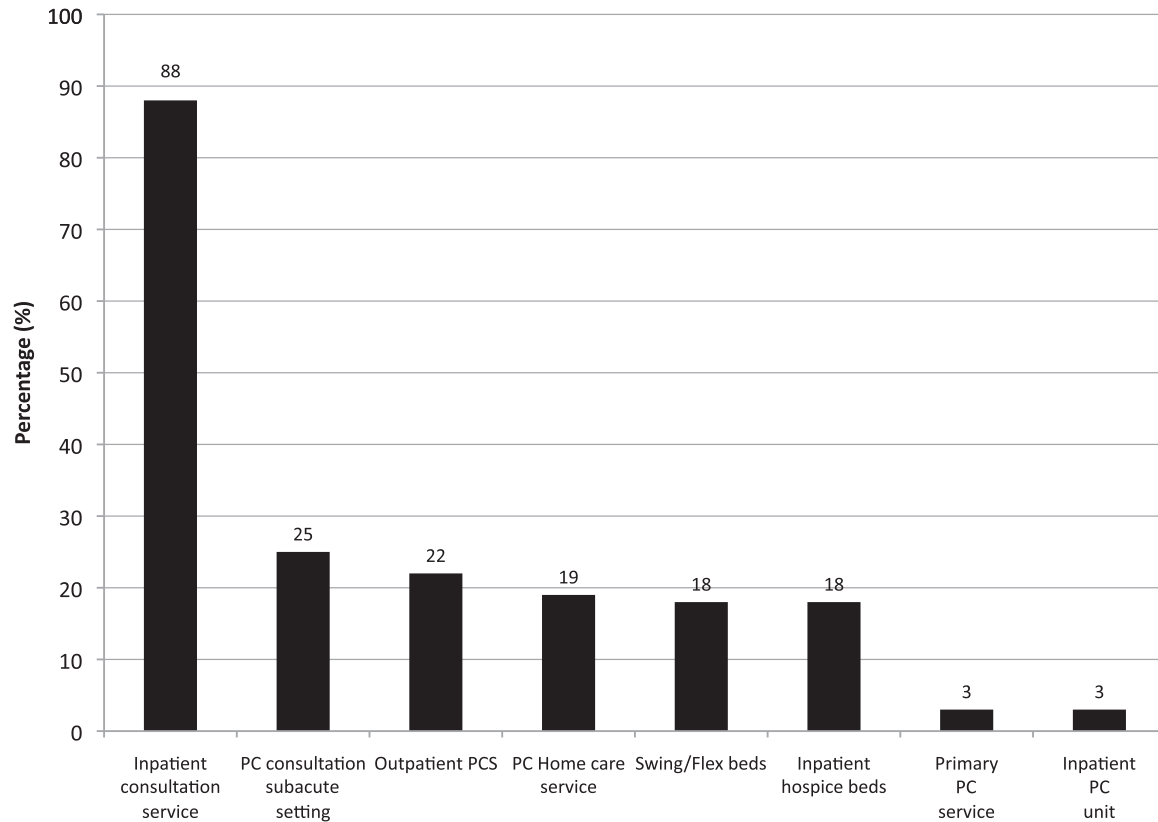
Overall, PC services comprised physicians (87%, $n = 105$), social workers (81%, $n = 98$), spiritual care professionals (76%, $n = 92$), and registered nurses (74%, $n = 89$) (Table 3).

Table 2
Hospital Characteristics Associated with the Presence of a PC Program

Hospital Characteristic	PC Program ($n = 141$)		
	Yes, n (%)	χ^2	P
Bed size		41.9	0.001
1–149 beds ($n = 126$)	31 (25)		
150–299 beds ($n = 106$)	47 (44)		
300+ beds ($n = 90$)	62 (69)		
Ownership		70.4	0.001
Nonprofit ($n = 200$)	123 (62)		
Investor ($n = 68$)	6 (9)		
District ($n = 41$)	9 (22)		
City/county ($n = 15$)	3 (20)		
Teaching site ^a (yes = 58)	43 (74)	26.9	0.001
System affiliation ^b (yes = 165)	98 (59)	34.5	0.001
Participation in training programs designed to assist hospitals establish PC services (yes = 81)	63 (78)	51.6	0.001

^aTeaching site: hosted a residency training program as reported by the National Residency Matching Program.

^bSystem affiliation: including three or more hospitals.



PC Program Characteristics

Fig. 1. Prevalence of various types of adult PC services in the 143 California hospitals that have a PC program. PCS, PC service.

More than 91% ($n = 111$) of the PC services had three or more disciplines on their clinical teams and 38% ($n = 46$) had six or more (mean number of disciplines 5, median 5, SD 1.8, range 1–9).

A total of 101 programs (72% of hospital respondents with PC programs) offered information about specialty board certification status of the physicians who staff their PC services (Table 3). Half of the services reported that

Table 3
Frequency of Disciplines Involved in Staffing of PC Programs and Board Certification Status of Staff

Discipline	Frequency, % (n)	Board Certification, ^a ($n = 101$), % (n)		
		Most	Some	None
Physician	87 (105)	47 (47)	17 (17)	37 (37)
Social worker	81 (98)			
Spiritual care	76 (92)			
Registered nurse	74 (89)	24 (20)	18 (15)	58 (49)
Administration support	66 (80)			
Advanced practice nurse	42 (51)	53 (27)	6 (3)	41 (21)
Pharmacist	40 (49)			
Physical therapist	19 (23)			
Psychologist	9 (11)			
Psychiatrist	5 (6)			

^aBoard certification status for disciplines where such status was available: physicians, advance practice nurses, and registered nurses. Overall, 101 hospitals offering PC services provided information about board certification status of their staff.

all or most of their physicians and advance practice nurses were certified in hospice and palliative medicine, and one-quarter reported that all or most registered nurses were certified.

Trainees

A total of 47% ($n=57$) hospitals with PC programs identified that they participated in training a variety of medical professionals, including graduate nursing students, medical students, residents, general medical or subspecialty fellows, pharmacy students, and chaplain interns. On average, each site hosted trainees from 2.4 disciplines (median 2.0, SD 1.9, range 1–10). Among hospitals with PC programs that also have trainees, the largest proportion had residents (40%, $n=23$), followed by spiritual care or chaplaincy interns (30%, $n=17$), social work trainees (28%, $n=16$), general medicine or subspecialty fellows (26%, $n=15$), and medical students (25%, $n=14$). A relatively small proportion of sites had palliative medicine fellows (16%, $n=9$) or pharmacy students (16%, $n=9$).

Financial Support of PC Programs

The main sources of financial support for PC programs included direct funding from the hospital (74% of programs, $n=90$), philanthropy and donations (71% of programs, $n=86$), and in-kind support from the hospital (40% of programs, $n=49$), defined as “rather than providing ‘cash’ support, existing FTE (Full Time Equivalents) are assigned to staff the PC service.” Only 23% ($n=22$) of PC programs received financial support from professional fee billing, whereas 18% ($n=22$) received grants and 6% ($n=7$) received funding from a hospice (Table 4). In terms of how much funding is provided, 60% ($n=22$) of programs reported that they receive less than

\$250,000 in annual support and 32% ($n=35$) receive between \$250,000 and \$500,000. Only 9% ($n=9$) of hospitals reported receiving more than \$500,000 in annual financial support.

Program Goals

Fifty-nine percent ($n=71$) of PC programs indicated that the hospital or health system set goals for the program regarding patient/family satisfaction; 56% ($n=68$) had goals related to documentation of advance care planning; and 55% ($n=66$) had goals for clinical outcomes. Goals also were reported for the number of patients seen (40%, $n=48$) and hospice referral rates (40%, $n=49$).

Discussion

The results of our survey indicate that 44% of California’s acute care hospitals offer some form of PC service. This number represents a substantial increase from the 17% reported in 2000.⁴ Although this increase is significant, more than half of the hospitals in California still do not have any type of PC program. California’s prevalence rate appears to lag behind the reported national prevalence rate of 58.5% based on data from the American Hospital Association (AHA) annual survey.³ A possible explanation for this difference is that our definition of a PC program was consistent with national PC guidelines,^{1,5} whereas the definition used in the AHA survey was broader and could include programs that were narrowly focused on pain, rather than on comprehensive PC.⁶

Large nonprofit hospitals with residency programs were more likely to offer a PC program, whereas small, public, district, and investor-owned hospitals were less likely to offer any PC services. In small hospitals, it may be particularly challenging to provide a service with sufficient availability and expertise to respond to patient needs, particularly when utilization is limited. The low prevalence in public and district hospitals may be the result of the especially constrained financial situation at these institutions. The limited availability of a PC service at these institutions is troubling because patients at these institutions, who are typically underserved, are further

Table 4
Financial Support Provided to PC Services
($n=143$)

Source of Financial Support	Frequency, % (n)
Directly from hospital	74 (90)
Philanthropy and donations	71 (86)
In-kind support from hospital	40 (49)
Professional fee billing	23 (22)
Grants	6 (7)
Volunteer (no funding provided)	6 (7)

disadvantaged by the lack of a PC service. While small hospitals and public hospitals face specific challenges that may explain the low prevalence of PC services in those institutions, it is striking that so few investor-owned hospitals offer a PC service, although significant cost savings and quality improvements are associated with inpatient PC consultation services.⁷ Interestingly, system affiliation was strongly associated with offering PC services, suggesting that system initiatives, such as those provided by the Veterans Administration, Kaiser Permanente, Catholic Healthcare West, and others, can be effective in promoting the development of a PC service. System-driven initiatives might help promote the growth of a PC service in investor-owned hospitals, many of which have a system affiliation. Participation in a training program designed to help establish a PC service (CHIPS⁸ or PCLC) was the strongest predictor of having a service. This link suggests that targeting small, public, district, and investor-owned hospitals to participate in these training programs may succeed in increasing the proportion of these institutions that offer PC services. Similar training programs could promote development of PC services in hospitals around the world. Consistent with this approach, since our survey was administered, an initiative by the California HealthCare Foundation that includes PCLC training has focused on promoting the development of PC services in California public hospitals.

An inpatient consultation service is by far the most common type of PC service provided by hospitals, and it is typically staffed by a physician, social worker, spiritual care professional, and registered nurse. More than 90% of programs include three or more disciplines, and almost 40% of programs reported six or more disciplines. Furthermore, most physicians and advanced practice nurses working with PC services were certified in PC. The fact that services are staffed predominantly by interdisciplinary teams of certified clinicians shows that most sites are building services aligned with the National Quality Forum preferred practices regarding staffing and certification.

We found that most PC programs have annual operating budgets of less than \$250,000, and nearly all have operating budgets of less

than \$500,000. This funding demonstrates that most hospitals offering PC services are able to create them with fairly modest investments. The very small proportion of PC services that are entirely dependent on volunteer effort from providers suggests that PC services are increasingly recognized as vital services that require dedicated staffing and support. Furthermore, most PC programs operate in an environment where the hospital or health system has set goals and expectations for outcomes. Meeting such expectations requires that PC services collect and analyze data and suggests that PC services are operating on the same footing as other hospital services, where expectations for productivity and outcomes are the norm.

Although the survey response rate was excellent, our findings should be tempered by the following limitations: Our survey relied on self-report information, which has potential shortcomings, and some respondents may have provided inaccurate responses or have had an incomplete understanding of their hospital's PC program. However, the fact that not all hospitals reported having a PC program suggests a lack of bias in reporting. At minimum, respondents did not seem to overstate the services available at their sites. In addition, we were judicious in our efforts to identify the person who was most knowledgeable about the PC program at each hospital. Also, although we were able to describe prevalence and structure of hospital-based PC programs, we were unable to link these data to outcomes. This linkage is a crucial next step in improving the quality of PC service, but it was beyond the scope of our study.

PC programs in acute care hospitals in California have doubled since 2000, but more than half of the hospitals still do not offer any PC services. Initiatives targeting small, rural, and investor-owned hospitals could promote development of PC services in institutions where these critical services are least prevalent. PC programs are being held to specific goals and expectations. The fact that hospital leaders could make ongoing support for PC services contingent on achievement of specific goals for quality and financial outcomes may encourage hospitals to make the initial investment to establish PC programs. Evidence of increased quality and improved resource

utilization associated with hospital-based PC services will likely lead to their continued growth. Our study provides important information on the structure of PC services that hospitals can use in developing such programs. Future research will need to evaluate the patient and system outcomes achieved by PC services and the structures and processes most closely associated with better outcomes.

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