

Evaluating the California Hospital Initiative in Palliative Services

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Background: Inpatient palliative care programs can improve care of patients with serious illness. We developed the California Hospital Initiative in Palliative Services (CHIPS) program to assist hospitals in establishing these programs. CHIPS included an introductory conference followed by 10 months of mentoring with telephone calls, e-mails, on-site consultation at the hospital, and a reunion conference.

Methods: To evaluate CHIPS and the factors associated with establishing inpatient palliative care programs, we conducted a cross-sectional telephone survey of leaders from the 38 hospitals that participated in CHIPS. We assessed the number of inpatient palliative care consultation services established by hospitals that participated in CHIPS (success) and hospital characteristics associated with success.

Results: Participants gave CHIPS high ratings. Six hospitals (16%) had a palliative care consultation service at enrollment in CHIPS and 19 hospitals (60%) established one after participation in CHIPS ($P < .001$). In bivariable comparisons, successful hospitals were more likely to have a hospitalist program ($P = .003$) or to be located in an urban setting ($P = .03$).

Conclusions: CHIPS seemed to help many hospitals establish inpatient palliative care programs. Hospitals with hospitalists and those in an urban setting were more likely to succeed in developing palliative care programs. Future studies should focus on the quantity and quality of care provided by these programs.

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MORE THAN 50% OF people in the United States die in hospitals, where chronic shortfalls in end-of-life care include undertreatment of pain and failure to respect patient preferences for care.^{1,2} The 1997 Institute of Medicine report on end-of-life care highlighted these shortfalls² and recommended palliative care services as one response for improving the care of patients with life-threatening illness. However, as of 2000, only 18% of hospitals in California offered palliative care services.³⁻⁵ We established the California Hospital Initiative in Palliative Services (CHIPS) program to assist hospitals in establishing palliative care services. We report the results of CHIPS 1 year after the end of the program.

METHODS

SUBJECTS

Subjects of this survey were the leaders of the 38 hospital teams that participated in CHIPS, a 2-year statewide initiative to increase the number of hospital-based palliative care services in California.

PROGRAM DESCRIPTION

We recruited all types of hospitals from across California, beginning with the 38 hospitals

that expressed an interest in developing a palliative care program in a survey of the prevalence of inpatient palliative care services that we conducted in 2000.⁴ We primarily recruited from this list of interested institutions but also advertised CHIPS broadly to all members of the California Hospital Association through e-mails and newsletters.

In year 1 we accepted teams from the 16 hospitals, of the 21 that applied, that seemed most ready to implement palliative care programs. The 5 teams from hospitals not accepted in year 1 were included among the 22 hospitals we accepted in year 2, for a total of 38 hospitals in 2 years. These 5 institutions offered an opportunity to further assess the effect of CHIPS by examining a group of hospitals that were prepared to enroll but initially did not participate in the intervention.

The CHIPS application asked each hospital team to identify 3 individuals representing at least 2 disciplines (physician, nurse, nurse practitioner, social worker, chaplain, psychologist, or pharmacist) to participate in the program, to appoint a leader, and to describe the current state of palliative care services at their institution. To ensure that each team had support from their administration, we required that each application include the signature of the institution's chief operating officer or administrator and a \$2500 fee.

All teams attended a 2-day initial conference at which they learned key skills for establishing palliative care services. The conference included brief, large-group didactic sessions followed by small-group sessions. The small groups consisted of 4 to 6 hospital teams facilitated by

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Table 1. Characteristics of Hospitals Participating in CHIPS*

Characteristic	All Hospitals (N = 38)	Cohort 1 (n = 16)	Cohort 2 (n = 22)	P Value
Not for profit	35 (92)	16 (100)	19 (68)	.18†
Private	31 (82)	11 (69)	20 (91)	.08†
Urban	31 (82)	15 (94)	16 (73)	.09†
Tertiary care center	17 (45)	8 (50)	9 (41)	.58‡
Academic affiliation	17 (45)	8 (50)	9 (41)	.58‡
Hospitalists present	30 (79)	15 (94)	15 (68)	.06†
Part of health care system	24 (63)	12 (75)	12 (55)	.19‡
Funding	20 (53)	10 (63)	10 (45)	.30‡
Presence of hospice program	25 (66)	14 (88)	11 (50)	.01†
Presence of pain service	22 (58)	8 (50)	14 (64)	.40‡
Small size (<100 beds)	4 (11)	1 (4)	3 (14)	.33†
No. of beds, mean	297	373	243	.01§

Abbreviation: CHIPS, California Hospital Initiative in Palliative Services.
 *Data are given as the number (percentage) unless otherwise indicated.
 †Fisher exact test.
 ‡ χ^2 Test.
 §*t* Test.

a CHIPS faculty member who also served as each team's mentor. During the next 10 months, each team received ongoing mentoring from their assigned faculty member, including regularly scheduled telephone conference calls, e-mails, and an on-site consultation by the faculty mentor at the team's hospital.

Between 8 and 11 months after the initial conference, teams attended a 1½-day reunion conference. Content for the reunion conference was based largely on needs identified by participants. In addition, teams shared their successes and challenges in an open forum session and with posters. The initial conference for cohort 1 was in June 2001. The initial conference for cohort 2 and the reunion conference for cohort 1 were in May 2002 and overlapped to enable teams to learn as much as possible from each other and to maximize networking opportunities.

SURVEY METHODS

We conducted a cross-sectional, 15-minute telephone survey of the 38 participating hospitals in January 2004. The survey was administered 29 months after the initial conference for cohort 1 but only 18 months after the initial conference for cohort 2.

A trained research assistant who was not involved with the CHIPS program contacted the leader of each team by telephone to arrange a time to administer the survey. If the original team leader was no longer involved with the palliative care program, the research assistant asked the leader to identify the person most knowledgeable about the program. If the team leader was no longer at the institution, the research assistant contacted another member of the team to complete the survey or to identify the person most knowledgeable about the program. Our protocol was approved by the University of California at San Francisco Committee on Human Research.

SURVEY

The survey^{4,5} (available on request) included questions about logistics, structure, and staffing of existing and planned palliative care services at the time of enrollment in CHIPS, at the reunion conference, and at the time of the survey. We also asked about the presence of a pain consultation service and of a hospice inpatient unit, a contract with hospice, or a hospice owned by the hospital, and whether members of the palliative care team had worked with other hospitals to help them develop palliative care programs. Finally, we asked the respondent to evaluate each com-

ponent of CHIPS and collected descriptive data about the hospital. We did not collect any personal data about the respondents.

DATA ANALYSIS

We characterized our data using univariable methods, and used χ^2 , Fisher exact, or *t* tests, as appropriate, to compare hospital characteristics between cohorts 1 and 2 and between successful and unsuccessful programs. Success was specified as establishment of a palliative care consultation service, an inpatient palliative care unit, or both. We used Microsoft Excel (Microsoft, Redmond, WA) to compile the database and SAS version 8.2 for Windows (SAS Institute Inc, Cary, NC) to conduct the analyses.

RESULTS

CHIPS HOSPITALS

The typical hospital participating in CHIPS was a large, not-for-profit, private hospital in an urban setting that had a hospitalist program (**Table 1**). More than half of the hospitals were part of a health care system, and only a minority had an academic affiliation. Hospitals participating in CHIPS were distributed throughout California, with 19 in northern California, 14 in southern California, and 5 in central California. Among the 18 hospitals that reported receiving funding for their palliative care program, sources of support included the hospital (n=16), grants (n=4), billing (n=2), and donations (n=1). Hospitals in cohort 1 were larger, more likely to have a hospice program before participating in CHIPS, and more likely to have a hospitalist program, although the difference in the number of hospitals with hospitalist programs did not reach statistical significance.

PALLIATIVE CARE CONSULTATION SERVICE

Of the 38 participating hospitals, 6 (16%) had a palliative care consultation service before CHIPS, 16 (42%) had one by the time of their reunion conference, and 25 (66%) had one at the time of the survey (after 29 months of participation in the intervention for cohort 1 and 18 months for cohort 2; $P<.001$ initially vs currently; **Figure**). Among the 32 hospitals that did not have palliative care consultation services at the time of the initial CHIPS conference, 19 (60%) had established a new service by the time of the survey ($P<.001$). Of the 6 hospitals that had a service at the time of the initial CHIPS conference, all 6 still had one at the time of the survey. Of the 13 hospitals that did not have a palliative care consultation service in place at the time of the survey, 9 hospitals (69%) had active plans to start one, and of these, 5 hospitals had plans to begin within 6 months. Overall, 34 (89%) of 38 hospitals either had a palliative care consultation service in place or were actively planning to start one at the time of the survey. Of the 5 hospitals that applied to CHIPS for cohort 1 but did not participate until cohort 2, none established a program during the time between their application to cohort 1 and the cohort 2 initial conference; however, 3 hospitals (60%) had a program in place at the time of the survey. Of all of the characteristics we identified beforehand, only the presence of a hospitalist program ($P<.003$) and location in an urban setting ($P<.03$) were associated with starting a palliative care consultation service (**Table 2**).

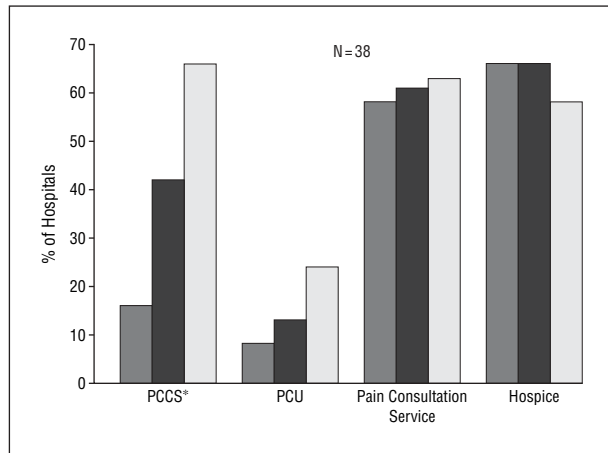


Figure. Percentage of hospitals participating in California Hospital Initiative in Palliative Services with palliative care services before the initial conference (gray columns), at the reunion conference (black columns), and currently (light gray columns). Hospice indicates inpatient hospice unit, hospice contract, or hospital-owned hospice; PCCS, palliative care consultation service; PCU, palliative care unit; and asterisk, $P < .001$.

INPATIENT PALLIATIVE CARE UNITS

Only 3 hospitals (8%) had a palliative care unit before the initial CHIPS conference, and all 3 units were still operational at the time of the survey (Figure). At the time of the reunion conference there were 4 units among CHIPS hospitals (13%), and at the time of the survey there were 9 (24%; $P = .04$, initially vs currently). Of the 35 hospitals that did not have palliative care units at the time of the CHIPS conference, 6 (17%) have one currently ($P = .01$). No hospital characteristics were associated with starting inpatient palliative care units.

OTHER SERVICES

Almost two thirds of the hospitals that participated in CHIPS had hospice or pain consultation services at the time of the initial conference and currently (Figure). Fully 23 respondents (60%) reported that they had worked with other hospitals to help them develop palliative care services.

EVALUATION OF CHIPS INTERVENTION

The mean rating for CHIPS overall was 4.63 on a 5-point Likert scale, where 5 was very helpful and 1 was not helpful (Table 3). Using a similar 5-point Likert scale where 5 was very important and 1 was very unimportant, we asked respondents to evaluate the importance of the individual components of CHIPS for establishing palliative care services. The initial conference was considered most important, followed by the reunion conference and on-site consultation.

COMMENT

CHIPS seems to have helped hospitals in California establish palliative care services. Among hospitals without palliative care consultation services at the beginning of CHIPS, 19 (60%) started programs and all 6 existing services continued to see patients, meaning that currently 25 (66%) of the 38 hospitals participating in CHIPS are offering palliative care consultation services to patients and their families.⁴

Table 2. Associations Between Hospital Characteristics and Successfully Establishing a New Palliative Care Consultation Service

Characteristic	P Value*	OR (95% CI)
Hospitalists	.003	10.2 (1.4-73.6)
Urban setting	.03	11.2 (1.1-112.5)
Profit status	>.99	0.7 (0.07-7.2)
Tertiary care	.49	1.3 (0.68-2.5)
Academic affiliation	.16	1.6 (0.87-3.1)
Funding	.16	1.6 (0.87-3.1)
Presence of hospice service	.47	1.9 (0.43-8.0)
Presence of pain service	>.99	1.2 (0.28-4.9)
Size	.28	4.4 (0.51-37.6)
Part of larger health system	.28	1.8 (0.67-4.6)

Abbreviations: CI, confidence interval; OR, odds ratio.

*Fisher exact test.

Table 3. Evaluation of Individual Components of CHIPS Intervention and Program Overall

Component	Mean ± SD Score
Initial conference*	4.75 ± 0.43
Reunion conference*	4.48 ± 0.56
On-site consultation*	4.35 ± 0.91
Networking with other hospitals*	4.00 ± 0.89
List serve*	3.97 ± 0.71
Conference calls*	3.47 ± 0.81
CHIPS program overall†	4.63 ± 0.67

Abbreviation: CHIPS, California Hospital Initiative in Palliative Services.

*Ranked on a 5-point Likert scale with 5 indicating very important; 1, very unimportant.

†Ranked on a 5-point Likert scale with 5 indicating very helpful; 1, not helpful.

Our cohort's 60% success rate is extraordinarily favorable considering broader trends in California hospitals, where only 18% offer palliative care services.⁴ Although hospitals with hospitalist programs implemented palliative care services more frequently, in our cohort, neither size, setting, academic affiliation, profit status, nor being part of a larger health system was associated with success in starting a palliative care consultation service. This finding suggests that a program such as CHIPS can be of help to a variety of hospitals.

Our finding of more frequent implementation of palliative care services at hospitals with hospitalist programs is interesting but must be interpreted with caution because 30 (80%) of 38 hospitals participating in CHIPS had hospitalist programs. Nevertheless, this observation may be in part due to the fact that hospitalists generally view palliative care as a core part of their practice,⁶ thereby providing the local leadership for establishing a palliative care service.⁷ Even if not directly involved in running a palliative care service, hospitalists may be more likely to use palliative care consultation services, thereby helping to sustain a service once it starts.⁸ It may also be that hospitals that start hospitalist programs are also more likely to start palliative care pro-

grams because of an organizational commitment to improving quality of care and patient satisfaction.

Our data show that it takes time to implement a palliative care consultation service. The number of hospitals with services in place continued to increase at each point, and even at the time of the survey, 5 hospitals had plans to establish a service within 6 months. These data suggest that the length of time for mentoring may need to be longer than the 10 months we included in CHIPS and that ongoing assistance may facilitate even greater success. We also found that 23 (60%) of the 38 hospitals participating in CHIPS helped other institutions develop palliative care programs. This finding is especially encouraging because it multiplies the effect of CHIPS and suggests that such a program can empower and educate participants so that they can become agents of change.

Consistent with the overall success of CHIPS, the program and its individual components were highly rated by respondents. Conferences, on-site consultation at the team's institution, and networking were the most highly rated components of the intervention, with participants noting that personal contact with faculty and teams from other hospitals was most beneficial. Because conferences and on-site consultation by faculty at each hospital require significant investments of time and money, it would be useful to know which components of CHIPS are most important for success. However, all participating hospitals received the entire intervention, and, other than the ratings we report herein, we do not know which components of the intervention are most closely associated with success. We are conducting a program similar to CHIPS called the Palliative Care Leadership Center Initiative. This 6-site, national initiative builds on CHIPS with an updated curriculum but differs in that it includes more telephone mentoring calls but does not include on-site consultation by faculty at the participating institutions. The results of the Palliative Care Leadership Center Initiative could be compared with CHIPS to help elucidate the relative importance of specific components of the intervention.

Our findings must be interpreted in light of certain limitations. First, we did not visit each hospital to independently verify whether those hospitals that reported having palliative care services really did have them. To reduce the likelihood of bias in reporting, we used specific definitions for palliative care services, employed a research assistant not associated with CHIPS to conduct the survey, and assured respondents that their answers would be coded and kept confidential. That 6 (16%) of the 38 hospitals participating in CHIPS had a palliative care consultation service at the time of the initial conference is nearly identical to the 17% prevalence found in a previous study of California hospitals⁴ suggests that baseline responses were unbiased. Second, it may be that the hospitals that enrolled in CHIPS were on the verge of developing palliative care services and would have done so without CHIPS. Arguing against this possibility is that none of the 5 hospitals that applied for cohort 1 but did not participate until cohort 2 established palliative care services during the 10 months that they waited for their initial CHIPS conference, yet 3 of these hospitals did establish palliative care services after participating in CHIPS. In addition, although the baseline prevalence of hospice

and pain services was high, we saw no increase in the number of hospitals offering these services, which suggests that these institutions were not simply starting all types of palliative care-related services but started those programs that were the focus of CHIPS. Third, because the hospitals that participated in CHIPS were interested in developing palliative care services and almost 30 (80%) had hospitalist programs, our findings may not be generalizable to all hospitals. Nevertheless, all types of hospitals participated in CHIPS and succeeded. Fourth, we did not assess either the quantity or quality of care provided by these new palliative care programs because such data were beyond the scope of this research.

CHIPS seems to have succeeded in helping hospitals establish new palliative care services, thereby increasing the number of patients who can benefit from them. The presence of a hospitalist program and location in an urban setting were associated with success in establishing new palliative care programs, but all types of hospitals succeeded, which suggests that any hospital can establish these services. Future research should examine the quality of care provided by these programs to ensure that these services are providing the highest quality of palliative care.

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