

# CIVHC Palliative Care Task Force Research Review

February 2010



CENTER FOR IMPROVING  
**VALUE** IN HEALTH CARE

## Background

---

CIVHC's mission is to reach the health care Triple Aim of improving health, enhancing quality and containing costs. CIVHC's specific focus areas are developed based on input from stakeholders across the state combined with research that identifies opportunities to reach the Triple aim goals. The following document reviews some of the research that has been conducted over the last decade to offer evidence to the value and patient satisfaction associated specifically with palliative care.

Palliative care is specialized medical care for people with serious illnesses. This type of care is focused on providing patients with relief from the symptoms, pain and stress of serious illness, whatever the diagnosis. The goal is to improve quality of life for both the patient and the family. Palliative care is provided by a team of physicians, nurses, and other specialists who work with a patient's other health care providers to provide an extra layer of support. Palliative care is appropriate at any age and at any stage in a serious illness and can be provided together with curative treatment.

Palliative care achieves the Triple Aim by improving patients' quality of life and family satisfaction and well-being, and by reducing utilization and costs by matching treatments to goals. CIVHC recognizes palliative care as a highly effective interdisciplinary model to be emulated by the entire health care delivery system.

Research has demonstrated that palliative care is associated with:

- most appropriate level of care for patients who are facing advanced illness,
- increased patient and family satisfaction, and
- a reduction in cost to the health care system.

A unique aspect of palliative care is that it is delivered to the patient where the patient is located, whether the patient is in the hospital, or in the community (home, skilled nursing facility, assisted living residence, etc.)

## Palliative Care Services in the Hospital

---

Between 2000 and 2004, a longitudinal case study was conducted to analyze the impact of the Virginia Commonwealth University Medical Center's Palliative Care Unit on the cost of care. Variables included (1) the average direct cost per day for the last 20 days prior to death on the palliative care unit (PCU) compared to intensive care unit (ICU) and all other non-PCUs, (2) the average direct cost per day to care for patients transferred from the ICU or step-down units to the PCU, and (3) direct admissions to the PCU for patients entering through the emergency department. The study concluded that average direct costs for patients on the PCU were approximately \$700 per day, compared to average direct cost for patients on the ICU and all other units that exceeded \$2,500 per day and \$1,000 per day, respectively.<sup>1</sup>

At the California Pacific Medical Center in San Francisco, a study was conducted to evaluate the economic and clinical impact of their palliative care consultation service. A significant decrease in costs following a palliative care consultation was found, translating to an annual cost savings of \$2.2 million. Costs were reduced as a result of establishing and implementing patients' goals of care as demonstrated by an independent chart review and supported by shifts in costs following a consultation associated with shifts in unit type, e.g., decreased days in the ICU, and increased use of pharmacy and physical and occupational therapies. Regarding clinical impact, this study found that patients receiving a palliative care consultation experienced significant improvements in their symptoms of pain, dyspnea, and secretions.<sup>2</sup>

A multi-site study in Colorado, Oregon, and California was conducted by Kaiser Permanente in which the impact of an interdisciplinary palliative care service (IPCS) on patient satisfaction, clinical outcomes, and cost of care for six months post-hospital discharge was measured. In addition to reports of higher satisfaction, improved communication, and improved symptoms, IPCS patients had fewer ICU admissions on readmission (IPCS: 12, Usual care: 21), longer median hospice stays (IPCS: 24 days, Usual care: 12). Total health care cost decreased, including a 6-month net cost savings of \$4,855 per patient (\$65 per patient per day for all sites and \$123 per patient per day for Colorado) from the time of intervention to the time of death (on average, 120 days later).<sup>3</sup>

Another similar study was conducted at Montefiore Medical Center in the Bronx, NY, examining 368 patients. Findings included high levels of patient, family and referring provider satisfaction with 87% reporting decreased pain or other distressing symptoms post-consult. Charges associated with repeat ER visits (9.1% vs. 20.8%) and hospitalizations (35.1% vs. 42.9%) were found to be lower for patients who had received palliative care consultation. Utilization decreases were also found, including reductions in ancillary tests (median # fell from 4 to 0 after PC consultation) and ventilator charges (\$5561 vs. \$2080 post-consult).<sup>4</sup>

Hanson et al. conducted a study in which prospective data was collected on all palliative care consults in a tertiary care university hospital to (1) describe impact on symptoms and end-of-life treatments and 2) test whether palliative care consultation is associated with reduced hospital costs. Palliative care recommendations were implemented in 88% of cases, with new DNR/DNI orders in 34%, new comfort orders in 44% and 27% referral to hospice; in addition, those who received palliative care had improved symptom scores. Compared to matched controls, palliative care cases had lower costs per day (\$897 vs. \$1004). Per diem costs were

10.7% less with palliative care and 20.5% less for those with >50% hospital days with palliative care consultation.<sup>5</sup>

Between 2002 and 2004, a study was conducted in which administrative data from 8 hospitals with established palliative care programs was analyzed by Morrison et al. This study found that palliative care patients who were discharged alive had an adjusted net savings of \$1696 in direct costs per admission and \$279 in direct costs per day including significant reductions in laboratory and intensive care unit costs compared with usual care patients. The palliative care patients who died had an adjusted net savings of \$4908 in direct costs per admission and \$374 in direct costs per day including significant reductions in pharmacy, laboratory, and intensive care unit costs compared with usual care patients.<sup>6</sup>

### Palliative Care Services in the Community

Kaiser Permanente conducted a study in southern California to evaluate the effectiveness of a palliative care program. Patients enrolled in the Palliative Care Program comprised the treatment group and were compared to patients enrolled in home health with equivalent diagnoses (primarily COPD, CHF or cancer) and an estimated life expectancy of less than 24 months. The study found that enrollment in the palliative care program contributed significantly to lowered acute care service use and costs of care while maintaining high levels of patient satisfaction. These findings remained highly significant even after controlling for days on service, severity of illness, and having a CHF diagnosis. Those enrolled in palliative care averaged a 45% decrease in costs as compared to usual care patients.<sup>7</sup>

Another study was conducted with patients from Kaiser Permanente Hawaii Medical Group, Honolulu, HI and Kaiser Permanente Colorado Medical Group, Aurora, CO, to determine whether an in-home palliative care intervention for terminally ill patients can improve patient satisfaction, reduce medical care costs, and increase the proportion of patients dying at home. The participants of this study were 298 homebound, terminally ill patients with prognosis of ≤ one year to live and one or more hospital or ED visits in the previous 12 months. Patients who received palliative care had increased satisfaction with services at 60 days after enrollment and significantly fewer emergency department visits, hospital days, skilled nursing facility days, and physician visits than those in the comparison group.

MEASURES	With PC Services	Without PC Services
Patient Satisfaction Rates	Baseline: 80.4% After 30 days: 93.1% After 60 days: 92.3% After 90 days: 93.4%	Baseline: 74.1% After 30 days: 80% After 60 days: 87% After 90 days: 80.8%
Emergency Department Utilization	20%	33%
Hospitalization	36%	59%
Adjusted Mean Patient Cost per Day*	\$95.30	\$212.80
Death at Home	71%	51%

\*33% reduction in cost for patients receiving PC services

## Comprehensive Case Management and End-of-Life Care

---

Some studies have been conducted to determine the cost and quality impact of case management (not named palliative care) for patients with advanced illness.

A prospective cohort study was conducted with patients insured by Blue Shield of California to determine the effect of intensive patient-centered management on service utilization and survival. According to this study, patient-centered management is a comprehensive patient-focused collaboration that includes end-of-life and pain management, education, provider coordination, and patient advocacy. It emphasizes the selection and coordination of services from the patient's perspective and considers all of the patient's circumstances. Overall, patient-centered management substantially reduced hospital admissions by 38% (95% confidence interval, hospital days by 36%, and ED visits by 30%, while dramatically increasing home care by 22% and hospice use by 62%. The average combined utilization cost in the patient-centered management cohort was \$49,742 per patient for the 18-month study duration, compared with \$68,341 in the usual care management cohort, giving an average savings of \$18,599 per patient. Overall findings suggest comprehensive patient-centered management can reduce utilization and costs over usual management without shortening life.

Aetna Insurance, Inc. sponsored a study to evaluate the impact of comprehensive case management and expanded insurance benefits on use of hospice and acute health care services among enrollees in Aetna health plans. Expanded hospice benefits included extending the durational definition of terminal illness from 6 months to 12 months; continued receipt of curative treatment while also receiving hospice services; removal of length of stay limits for inpatient hospice and maximum dollar limits for outpatient hospice; provision of 15 days per year of respite benefits for family members; and availability of bereavement services through employer assistance programs. Hospice use increased for all groups receiving case management compared to the respective control groups: from 30.8% to 71.7% for commercial members with case management and from 27.9% to 69.8% for commercial members with case management and enhanced hospice benefits. Mean hospice days increased from 15.9 to 28.6 days for commercial members with case management and from 21.4 to 36.7% for commercial members with case management and enhanced hospice benefits. Inpatient stays and emergency visits were lower for all groups receiving case management services compared to their respective control groups. These data suggest that comprehensive health plan case management and more liberal hospice benefit design may help to break down barriers to hospice use; benefits might be liberalized within the context of such case management programs without adverse impact on total costs.

## REFERENCES

---

1. White KR, Stover KG, Cassel JB, Smith TJ. Nonclinical outcomes of hospital-based palliative care. *J Healthc Manag* 2006;51:260-73.
2. Ciemins EL, Blum L, Nunley M, Lasher A, Newman JM. The economic and clinical impact of an inpatient palliative care consultation service: a multifaceted approach. *J Palliat Med* 2007;10:1347-55.
3. Gade G, Venohr I, Conner D, McGrady K, Beane J, Richardson R, Williams M, Liberson M, Blum M, Della Penna R. Impact of an inpatient palliative care team: a randomized control trial. *J Palliat Med* 2008;11:180-90.
4. O'Mahoney S, Blank AE, Zallman L, Selwyn PA. The benefits of a hospital-based inpatient palliative care consultation service: preliminary outcome data. *J Palliat Med* 2005;8:1033-1039.
5. Hanson LC, Usher B, Spragens L, Bernard S. Clinical and economic impact of palliative care consultation. *J Pain Symptom Manage* 2008;35:340-6.
6. Morrison RS, Penrod JD, Cassel JB, Caust-Ellenbogen M, Litke A, Spragens L, Meier DE. Cost savings associated with US hospital palliative care consultation programs. *Arch Intern Med*. 2008;168:1783-1790.
7. Brumley R, Enguidanos S, Cherin D. Effectiveness of a home-based palliative care program for end-of-life. *J Palliat Med* 2003;6:715-724.

For questions regarding this document, please contact Jenny Nate at [jnate@civhc.org](mailto:jnate@civhc.org).