

How to Change a Culture to Make It Easier to Promote and Provide Palliative Care

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Remember your message varies
depending on your audience!!

Health Care Spending

- Health care spending in the U.S. is— appropriately— concentrated on the sickest and neediest patients: the top 5% of spenders account for nearly 50% of all health care costs. This group is characterized not only by the presence of one or more serious medical illnesses, but also by functional dependency (needing another person to get through the day), cognitive impairment, frailty, and heavy reliance on family and other caregivers. Contrary to common belief, the majority of people in this highest-cost, highest-need group are living with a serious illness. Only 11% of them are in the last twelve months of life. (CAPC,2019)

PATIENT EXPERIENCE: **Twenty-two percent** of people with a serious illness reported that hospital staff were not responsive to their needs, **23%** reported receiving conflicting information from different health professionals, **21%** would not recommend their hospital to someone else who has the same illness, and less than **50%** were asked what their personal preferences would be if a critical situation should arise.

HEALTH CARE COSTS: **Thirty-seven percent** reported having used up all or most of their savings dealing with their health and medical condition, even though **91%** reported having health insurance. **Twenty-three percent** reported being unable to pay for necessities like food, heat, or housing.

CAREGIVER DISTRESS: **More than one-third** of those who received help from a family caregiver noted strains and burdens on their caregivers, including emotional stress, physical stress, financial issues, and poorer health.

Biggest Concerns For Patients With Serious Illness

%Biggest/ One of Biggest Concerns

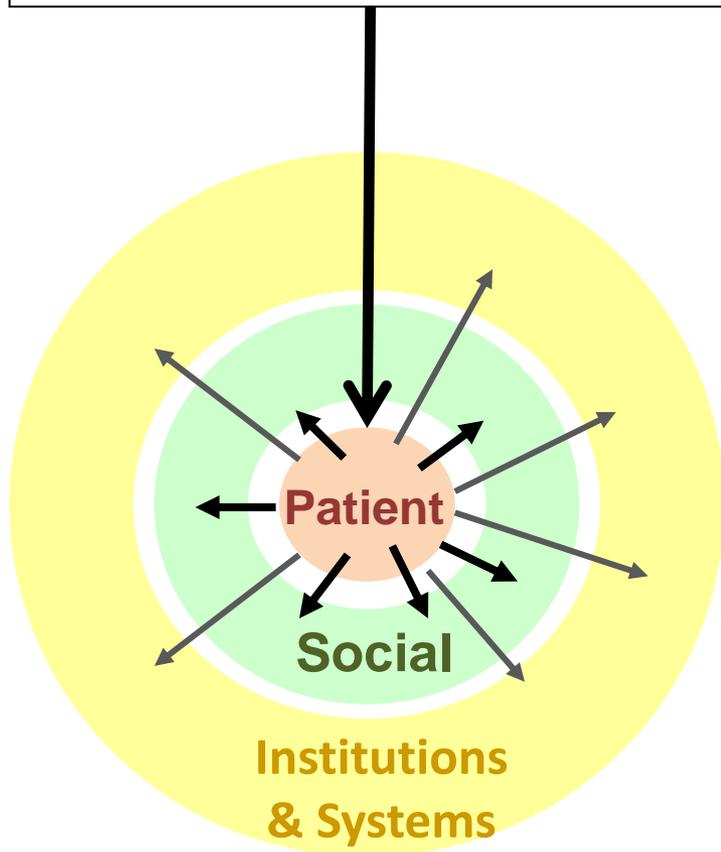
Doctors might not provide all of the treatment options or choices available	58%
Doctors might not talk and share information with each other	55%
Doctors might not choose the best treatment option for a seriously ill patient's medical condition	54%
Patients with serious illness and their families leave a doctor's office or hospital feeling unsure about what they are supposed to do when they get home	54%
Patients with serious illness and their families do not have enough control over their treatment options	51%
Doctors do not spend enough time talking with	50%



Language makes a difference. Palliative care should be positioned as care for patients with serious illness not advanced illness. Advanced illness is perceived to be more closely aligned with terminal illness.

Specialist Palliative Care elements:

- Patient-centered, family-oriented
- Expert symptom management
- Excellence in communication & care planning



1. Process Measures

Who:	Team & recipient characteristics
What:	Symptom management, patient / family meetings
When:	Timing of palliative care relative to other events
Where:	Locations, settings
How:	Expertise, algorithms, techniques, time spent
How much:	Volume, frequency, duration, intensity of PC

2. Outcome Measures

Primary impact is on the patient

- Prevention & relief of pain and other symptoms
- Clarification of prognosis and goals of care
- Changes to kind and setting of care provided

Secondary impact is on those around patient

- Family – less confused, more satisfied, better coping
- Nurses, doctors – appreciate specialist help, less distress

Tertiary impact is on institutions, systems

- Providers and payors – Fiscal and operational changes
 - Frequency, intensity, duration, costs, revenues
 - Different settings, entities
- Assist hospital or other provider / setting with overall quality & performance metrics

Summary of randomized studies comparing usual care to UC + PC

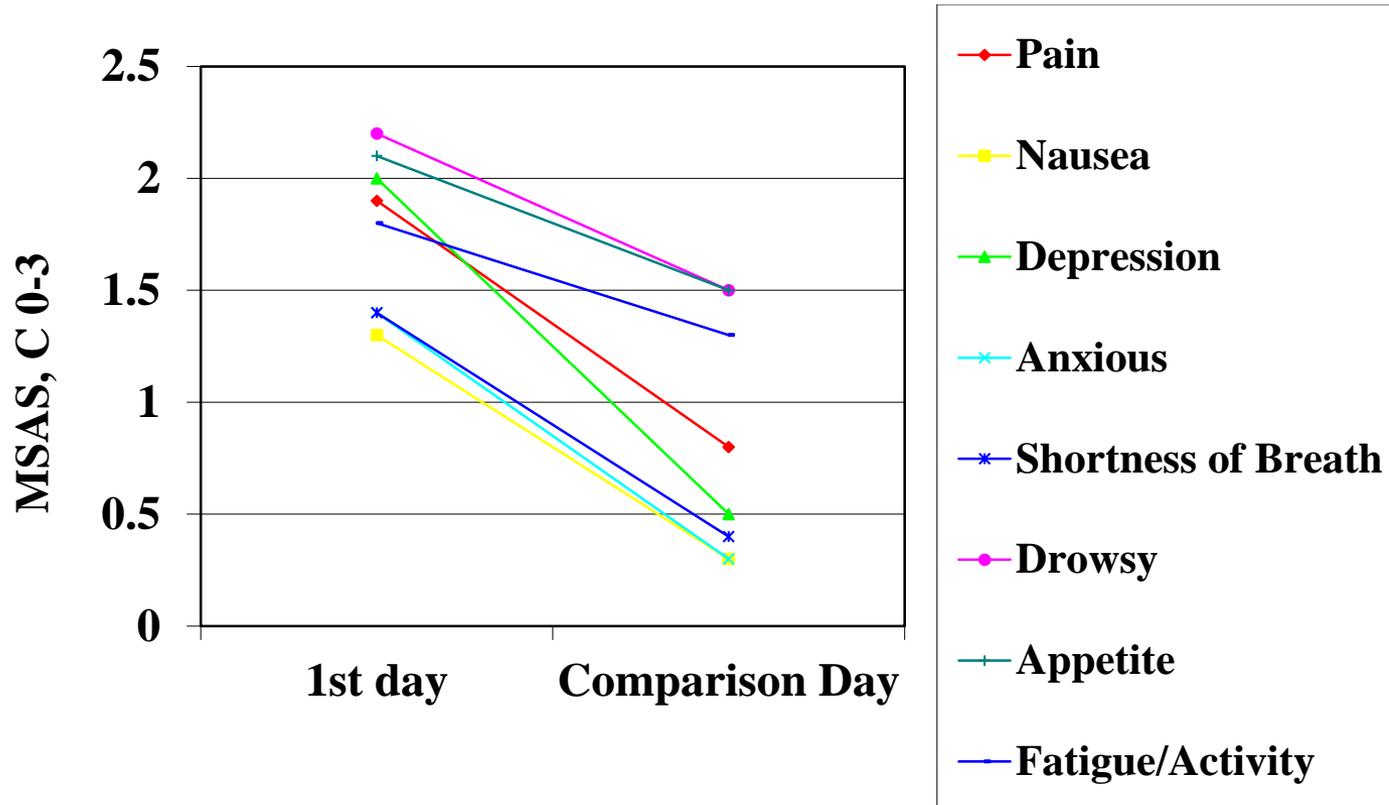
Study	Survival	Patient Experience C=caregiver	Cost
Brumley, 2007 (1/3 ca)	=	+++	-\$7550/person
Gade, 2008 (1/3 ca)	=	+++	-\$4885/person
Bakitas 2009 (Cancer)	Longer, 5.5 mon, NS	+++	=
Temel 2010 (lung ca)	Longer, 2.7 mon, S	+++	= Greer J, JPM 2016
Higginson 2012 (MS) [look for much larger RCT soon]	=	+++++ C+	-\$2700/person/ 12 wks
Zimmermann, 2014 (Cancer)	=	+++	=
Higginson 2014 (dyspnea, most cancer)	Longer, S, 15/100 at 1000 days for non-cancer = for lung ca	+++	-\$325/person for cancer Better QOL dominates cost- effectiveness
Sidebottom, 2015 (CHF)	=	+++ , C+	=
Bakitas 2015 (Ca)	Longer, 6.5 mon, S	=,+; C+	=
Ferrell, 2015 (Lung Ca)	Longer 6 mons NS	+++ , C+	=
Grudzen, 2016 (Cancer patients in ED)	Longer, 5.2 mons, NS	+++	=

Documented Impact of Inpatient Palliative Care Consultation

- Proven benefits of INPATIENT palliative care with referral to hospice if indicated
 - Better symptom control
 - Less distress in patients, caregivers
 - Equal survival
 - Lowered costs per day by 10-50% in the hospital
 - Increased utilization/referral to hospice
 - Lowered hospital re-admission rates if enrolled in hospice or followed by PC (5% vs. 25%)
 - \$5-7000 savings per person at Kaiser Permanente (2006 \$)

Cancer patient symptoms are improved by PC consultation or transfer

Memorial Symptom Assessment Scale, Condensed
30 pts with at least 2 consult days and symptoms >0
Khatcheressian J, et al. Oncology September 2005



The cost per day is reproducibly reduced as the goals change. JH data.

	Pre-transfer		PCU		
Chg Bucket	Charge	Net Allowable	Charge	Net Allowable	
Drug	252	164	137 	85	
Lab	518	361	78 	54	
O.R.	178	126	31	21	
Other	293	213	21	12	
Radiology	475	331	154 	102	
Routine	2,366	1,535	1,859 	1,287	
Supplies	362	264	95 	61	
Therapies	318	197	89 	57	
Unregulated	0	0	0	0	
Total	4,762	3,190	2,463	1,678	
Loss per day		-1572		-785	+\$887

Savings from PC Inpatient Consultation

The consult service generates considerable, reproducible cost savings compared to usual care. Every vertically integrated HMO uses PC (Kaiser, Sutter Health, MGH Partners, etc.)

Representative Studies	Palliative care CONSULT savings compared to usual care
Morrison SR, et al. JAMA Int Med 2008 8 centers with established PC consult programs	*14% direct cost savings, alive discharges; -\$2374 in 2014 dollars *22% direct cost savings, decedent discharges; -\$6871 in 2014 dollars
Penrod J, et al. J Palliat Med 2010 VAMCs that had established PC consult programs	38% direct cost savings for PC patients, overall, compared to matched patients not seen by PC
Starks et al. J Palliat Med 2013 1815 PC patients and 1790 comparison patients at 2 academic hospitals	costs were lower for all PC patients by 13% (\$2141), and for survivors by 19.1% (\$2946)
Tangeman JC et al. J Palliat Med 2014 1004 patients in Western NY hospitals, propensity matched PC or not	16% reduction, \$35,824, compared to \$42,731 for standard care, \$6907 less
May P, et al. J Clinic Oncol 2015 (Meier, Smith, et al 5 center RO1)	24% reduction in direct costs if patient seen by the end of the 2 nd day, -\$2,280 14% reduction in direct costs if patient seen by 6 days, -\$1312
May P, et al. Health Affairs 2016 (Meier, Smith, et al 5 center RO1)	PC consultation within 2 days gave a - 22% reduction in direct costs, with 2-3 co-morbidities - 32% lower costs with 4 comorbidities
Summary:	10-25% savings in direct costs across all studies With better symptom control

Savings from Inpatient PC units

PCUs reliably improve care and satisfaction, reduce costs.

More people go home with hospice, too.

Study	Palliative care CONSULT savings compared to usual care
Smith TJ, et al. JPM 2003	50-60% savings in the final days of life
Smith TJ, et al. WSJ 2004	Over 50% savings for decedents
Albanese JPM 2013	Savings from APCU was \$848,556, over half of which came from ICU to APCU transfers. \$4060/case.
Nathaniel JPM 2015	mean of patients' average direct cost per day was \$687 less while on the PCU than before (P < 0.001)

We showed that palliative care programs save money for hospitals and health systems...

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A High-Volume Specialist Palliative Care Unit and Team May Reduce In-Hospital End-of-Life Care Costs

THOMAS J. SMITH, M.D., PATRICK COYNE, R.N., M.S.N., BRIAN CASSEL, Ph.D.,
LYNNE PENBERTHY, M.D., ALISON HOPSON, R.N., M.S.N.,
and MARY ANN HAGER, R.N., M.S.N.

ABSTRACT

Background: Current end-of-life hospital care can be of poor quality and high cost. High volume and/or specialist care, and standardized care with clinical practice guidelines, has improved outcomes and costs in other areas of cancer care.

Methods: The objective of this study was to measure the impact of the palliative care unit (PCU) on the cost of care. The PCU is a dedicated 11-bed inpatient (PCU) staffed by a high-volume specialist team using standardized care. We compared daily charges and costs of the days prior to PCU transfer to the stay in the PCU, for patients who died in the first 6 months after the PCU opened May 2000. We performed a case-control study by matching 38 PCU patients by diagnosis and age to contemporary patients who died outside the PCU cared for by other medical or surgical teams, to adjust for potential differences in the patients or goals of care.

Results: The unit admitted 237 patients from May to December 2000. Fifty-two percent had cancer followed by vascular events, immunodeficiency, or organ failure. For the 123 patients with both non-PCU and PCU days, daily charges and costs were reduced by 66% overall and 74% in "other" (medications, diagnostics, etc.) after transfer to the PCU ($p < 0.0001$ for all).

Comparing the 38 contemporary control patients who died outside the PCU to similar patients who died in the PCU, daily charges were 59% lower ($\$5,304 \pm 5,850$ to $\$2,172 \pm 2,250$, $p = 0.005$), direct costs 56% lower ($\$1,441 \pm 1,438$ to $\$632 \pm 690$, $p = 0.004$), and total costs 57% lower ($\$2,538 \pm 2,918$ to $\$1,095 \pm 1,153$, $p = 0.009$).

Conclusions: Appropriate standardized care of medically complex terminally ill patients in a high-volume, specialized unit may significantly lower cost. These results should be confirmed in a randomized study but such studies are difficult to perform.

Daily charges were
59% lower,
total costs were 57%
lower
\$2358 -> \$1095
P=0.009

We hit the mainstream...

THE WALL STREET JOURNAL

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WEDNESDAY, MARCH 10, 2004 - VOL. CCXLIII NO. 48 - ★★ \$1.00

Final Days

Unlikely Way to Cut Hospital Costs: Comfort the Dying

**\$7000 less in last 5 days of
life if PC involved.**

With equal survival.

**And better symptom
control.**

Care, Not Cure

Average cost for terminally ill patients in palliative and nonpalliative programs during their final five days at one hospital

	NON-PCU	PCU
Drugs and chemotherapy	\$2,267	\$511
Lab	1,134	56
Diagnostic imaging	615	29
Medical supplies	1,821	731
Room & nursing	4,330	3,708
Other	2,152	278
Total	\$12,319	\$5,313

Note: PCU stands for palliative care unit. Each figure represents average cost of last five days for a cancer patient aged 65-plus, prior to in-hospital death. Figures are for 2001 and 2002.

Source: Virginia Commonwealth University medical center

KINS

“I want to send a team down to learn how to do this palliative care....”



Do the spiritual assessment, call the chaplain, and have a Goals of Care/EOL discussion if appropriate



Spirituality

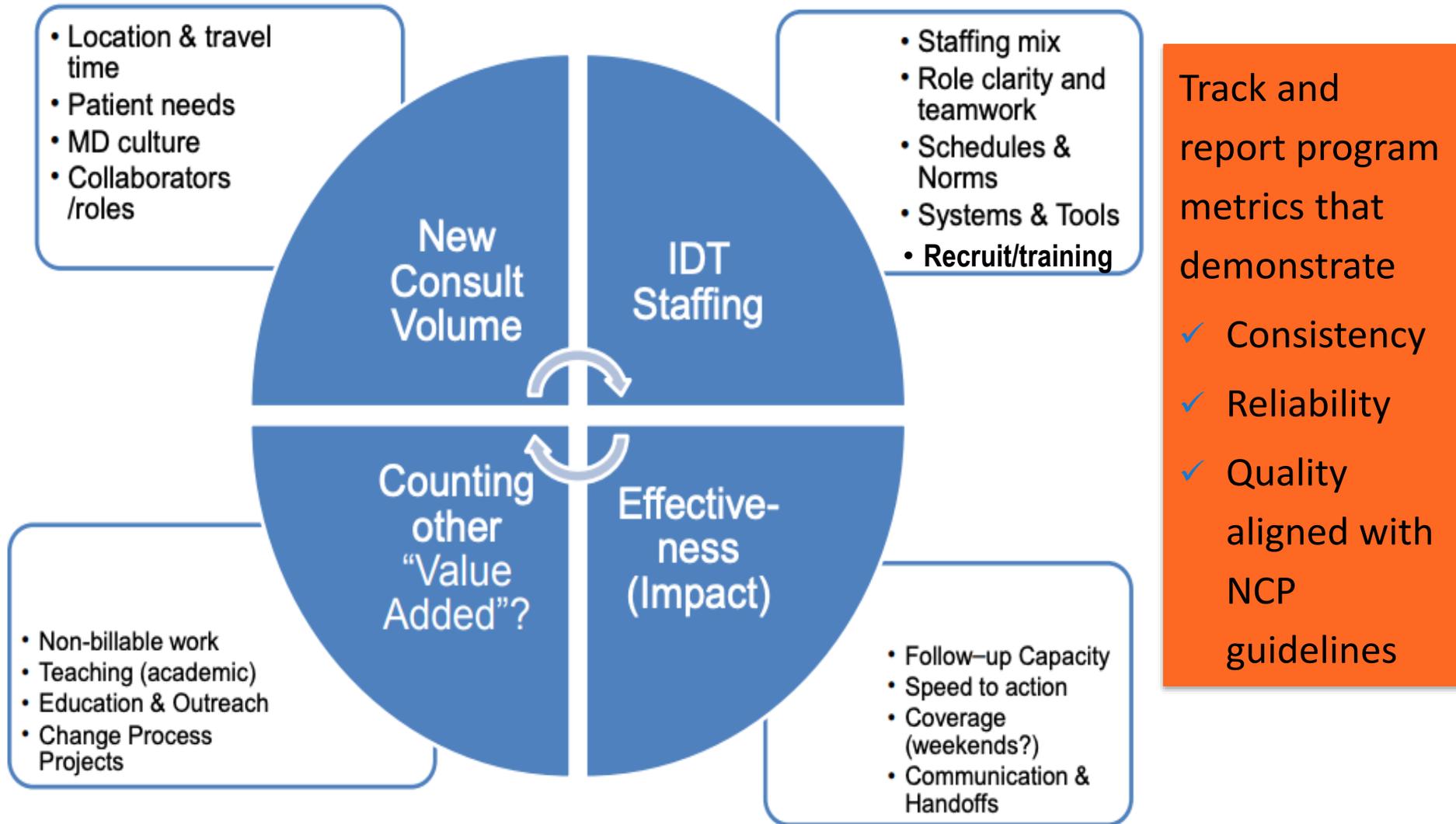
**Is religion or spirituality important to you?
Would you like to see a chaplain?**

Pt reqs chaplain/person from own spiritual bckgrd to visit

Generates referral to Pastoral Care

- 87% of patients want us to know their spiritual needs; 6% of us ask.
Balboni M, et al. [J Clin Oncol](#). 2013 Feb 1;31(4):461-7
- People who get spiritual care from chaplains use hospice more, ICU less.
Balboni TM, et al. [JAMA Intern Med](#). 2013 Jun 24;173(12):1109-17

Productivity is a “Dependent” Variable



The benefits of a PC consultation *continue* after people leave the hospital

- More hospice referrals: 57% vs. 27% at JHH if PC saw the person. (Hightet, Shieh, Smith, JEM in press)
- In New York State Medicaid patients, 10-X increase in hospice referrals. (Morrison SR, Health Affairs 2011)
- Over 3-X increase in hospice referrals if PC consulted in New York State Hospitals.
- In MGH NSCLC randomized trial, hospice use was the same but almost 3 times longer. (Greer JA et al, JCO 2012)
 - Median 9.5 days vs. 24 days with PC
 - 33% vs 60% used hospice for < 7 days, a marker for **POOR CARE** (QOPI and NQF)
- 30-day readmission rate is cut from 15% to 10%, and if a “goals of care” discussion the 30-day readmission rate risk is 5%. (O’Connor NR, JPM 2015)
- 5-fold reduction in 30 day readmits, 1% versus 5%.
- 5% 30-day readmission rate versus a 25% rate for matched patients who did not go home with hospice.
- Hospice saves Medicare \$8600 per person

The benefits of a PC consultation in the **OUTPATIENT** cancer office are similar

- Scibetta, Rabow and colleagues (JPM 2016) 922 decedents, 297 (32.2%) had palliative care referrals, with 93 (10.1%) receiving early referrals and 204 (22.1%) late referrals. Early palliative care was predominantly delivered in the outpatient setting (84%) while late palliative care was mostly delivered in the hospital (82%).
- early palliative care patients had lower rates of inpatient admits (33% versus 66%, $p < 0.01$), ICU (5% versus 20%, $p < 0.01$), and
- ED utilization (34% versus 54%, $p = 0.04$) in the last month of life.
- Direct costs of inpatient care in the last 6 months of life for patients with early palliative care were lower compared to late palliative care (\$19,067 versus \$25,754, $p < 0.01$), while direct outpatient costs were similar (\$13,040 versus \$11,549, $p = 0.85$).
- \$5198 less per person who had an early PC consultation

Meta concepts

- Healthcare is funded in a variety of ways
- Fundamentally the US healthcare system is rooted in “fee-for-service” third-party reimbursement in which you get paid more for doing more
- Palliative care often uses a “less is more” philosophy, and thus a special business case for PC had to be developed, **Value based care**
- The relevance of any given principle in this business case depends on degree of financial risk for costly care, and payor mix or revenue models
- Partnering with the entity that is at most financial risk for costly care can be a good way to pay for program / personnel
- Financial outcomes are secondary to clinical outcomes (next slide)

There are substantial savings

“Better care at a cost we can afford”

Financial impact	\$/year	\$/year,
		5 year total
IP PCU Margin	100,000	500,000
IP PCU Cost savings per Case, daily loss 59% less	1,336,000	6,680,000
PC IP Consult Cost Savings per Case \$2,374 for patients discharged alive, and \$6,871 for decedents, 11% died	2,530,000	12,650,000
PC OP Consult Cost Savings per case \$5198/case x 314	1,632,172	8,160,860
Hospice referrals Cost Savings per case, \$3000/case x 800	2,400,000	12,000,000
Professional fees, 50% collection rate	474,000	2370,000
Total impact	8,472,172	42,360,860

Does not count

- Lost revenue from chemo, other services
- Backfill revenue
- Increased ICU bed days
- Grants and contracts
- Good will, better satisfaction scores
- Less costly turnover as moral distress reduced in staff, esp. ICUs



On average, palliative care consultation is associated with reductions in direct hospital costs of more than \$3,000 per admission, and for the sickest patients with four or more diagnoses, these cost savings are closer to \$4,800 per admission

There are substantial savings possible “Better care at a cost we can afford”

By R. Sean Morrison, Jessica Dietrich, Susan Ladwig, Timothy Quill, Joseph Sacco, John Tangeman, and Diane E. Meier

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NO. 3 (2011): 454–463
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The People-to-People Health
Foundation, Inc.

THE CARE SPAN

Palliative Care Consultation Teams Cut Hospital Costs For Medicaid Beneficiaries

ABSTRACT Patients facing serious or life-threatening illnesses account for a disproportionately large share of Medicaid spending. We examined 2004–07 data to determine the effect on hospital costs of palliative care team consultations for patients enrolled in Medicaid at four New York State hospitals. On average, patients who received palliative care incurred \$6,900 less in hospital costs during a given admission than a matched group of patients who received usual care. These reductions included \$4,098 in hospital costs per admission for patients discharged alive, and \$7,563 for patients who died in the hospital. Consistent with the goals of a majority of patients and their families, palliative care recipients spent less time in intensive care, were less likely to die in intensive care units, and were more likely to receive hospice referrals than the matched usual care patients. We estimate that the reductions in Medicaid hospital spending in New York State could eventually range from \$84 million to \$252 million annually (assuming that 2 percent and 6 percent of Medicaid patients discharged from the hospital received palliative care, respectively), if every hospital with 150 or more beds had a fully operational palliative care consultation team.

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Jessica Dietrich is the director of research at the Center to Advance Palliative Care at Mount Sinai School of Medicine.

Susan Ladwig is a health project coordinator, Palliative Care Team, at the School of Medicine and Dentistry, University of Rochester, in Rochester, New York.

Timothy Quill is a professor of medicine, psychiatry, and medical humanities at the University of Rochester.

Joseph Sacco is the director of the Palliative Medicine Consultation Service at the

New York Medicaid Patients: \$84-252 million annually if most received PC

For US Medicaid (the other 84% of the US) savings could be \$525,000,000 - \$1,575,000,000

Medicare 2013: 1,904,640 deaths
1/3 in the hospital
Only 1/2 used hospice

If the others did, @\$8600/person savings, US would save \$8,189,952,000

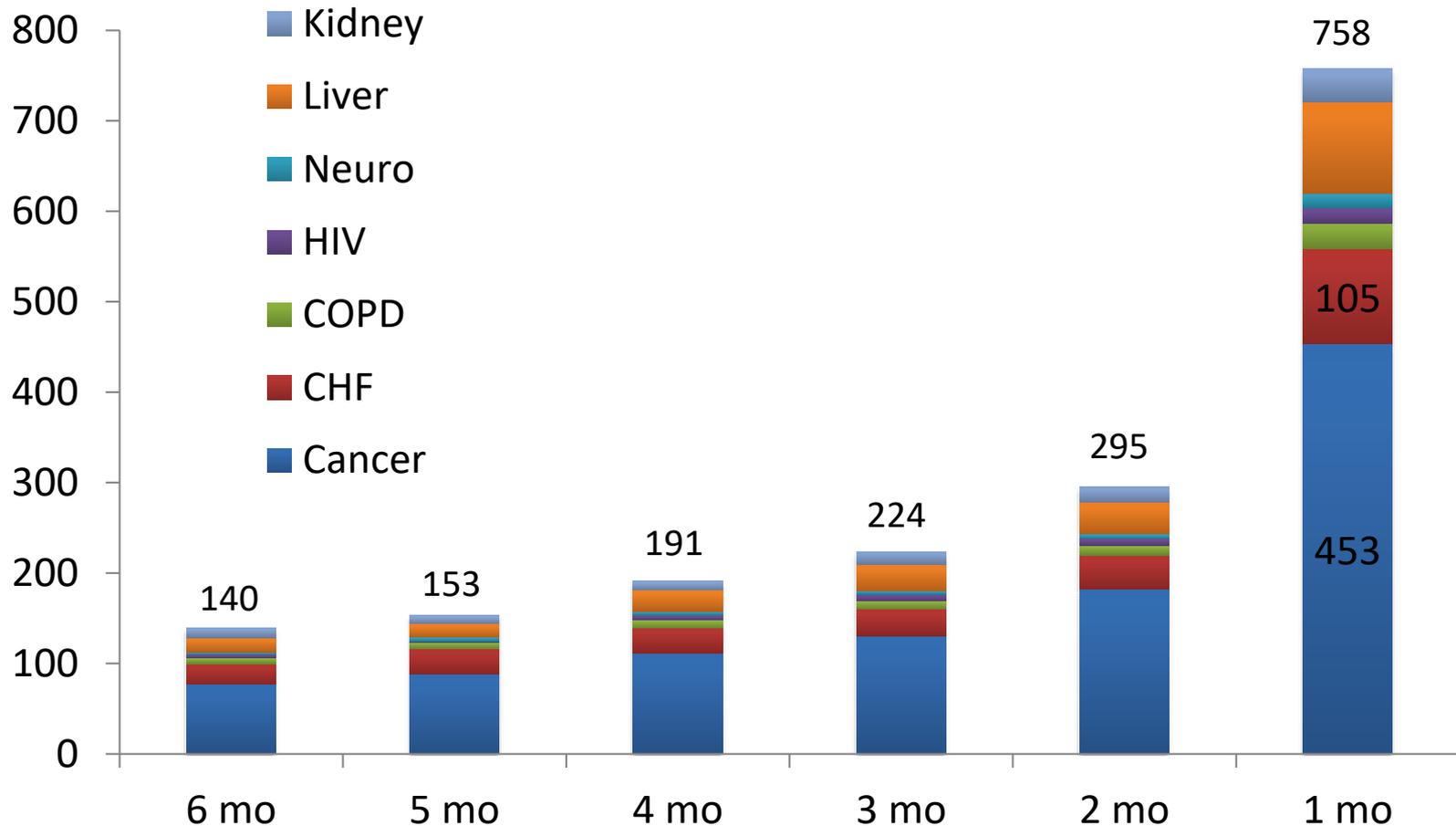
Principles of the business case for PC

1. Patients with progressive, life-limiting diseases [and their families] are at-risk for pain, suffering, and death; SPC helps prevent or improve those outcomes.
2. Patients with progressive, life-limiting diseases often have potentially avoidable ED visits and hospital admissions in last months of life
3. Hospitalizations towards the end of life tend to be lengthy and costly; these can result in negative net margin for hospitals, in both fee-for-service and risk-based models
4. Hospitals are penalized by payors for high 30-day readmission rates, 30-day mortality rates, and similar measures; significant portion of this is driven by care at EOL
5. Outpatient & home-based PC reduces ED visits and hospitalizations in the months before death
6. Inpatient PC programs reduce the cost of hospital admissions that do occur
7. In the fee-for-service model, third party revenue for PC services covers a fraction of the cost of a multi-disciplinary PC team, so subsidies are needed
8. The value of cost-savings and operational impacts from inpatient and outpatient PC usually exceeds program investments (positive return-on-investment)
9. All health systems can evaluate opportunities and impact for PC

Frequency of hospitalizations at EOL

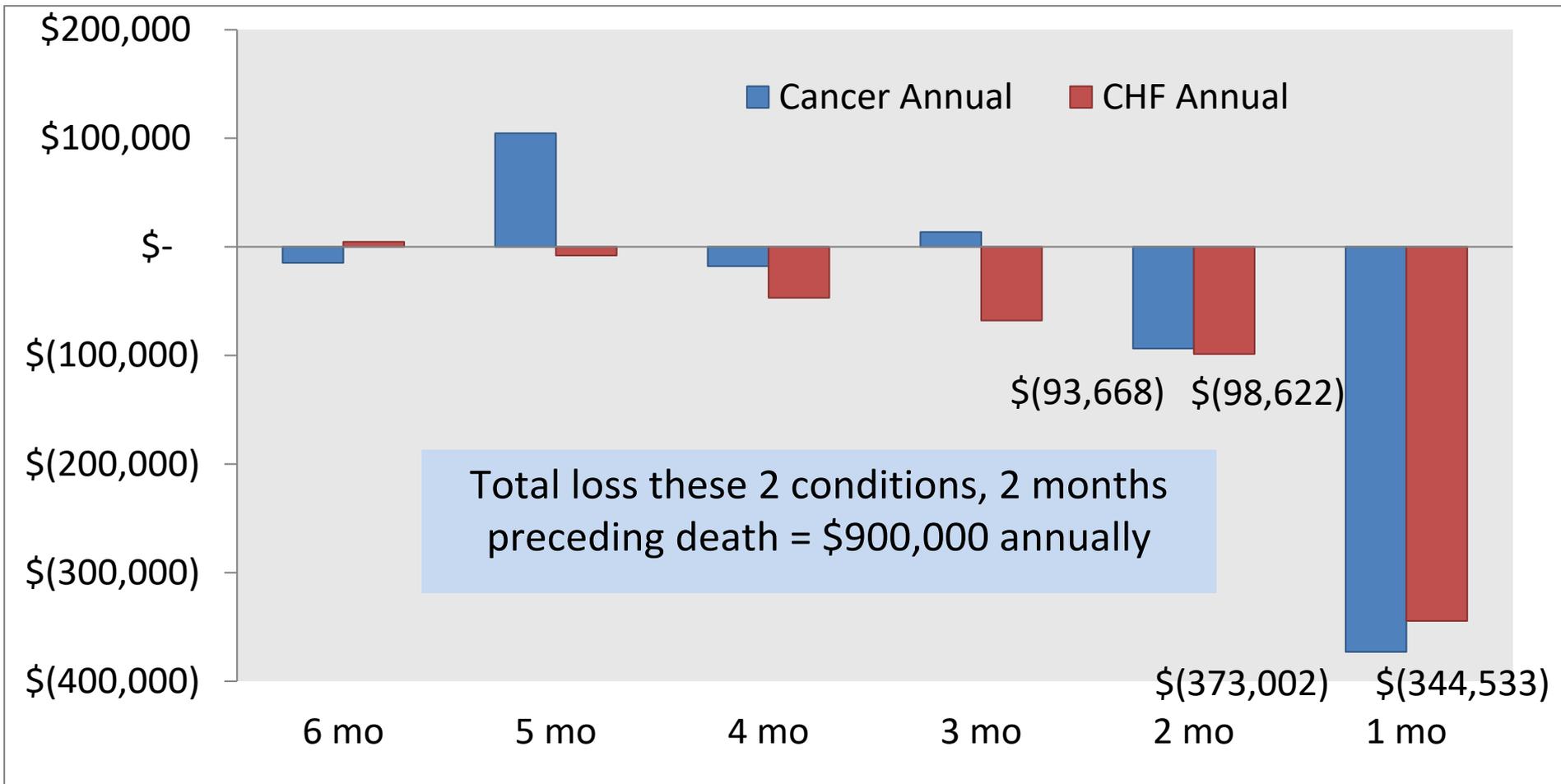
Admissions spike in final month of life

Analysis of decedent admission patterns, VCU, FY10-12



EOL hospitalizations long, costly

Annual Medicare inpatient net margin by month



Inpatient PC cost savings

PCU: Direct admits		PCU: Transfers	
N	Net Margin	N	Direct costs avoided
206	\$491,665	315	\$1,138,998

+

PC Consults: Early Engagement		PC Consults: Later Engagement	
N	Net Margin	N	Direct costs avoided
209	\$765,919	419	\$537,996

=

Total Inpatient Program		
N	Financial Impact	Avg. Impact / Case
1,149	\$2,934,578	\$2,554

OP PC Reduces Costs

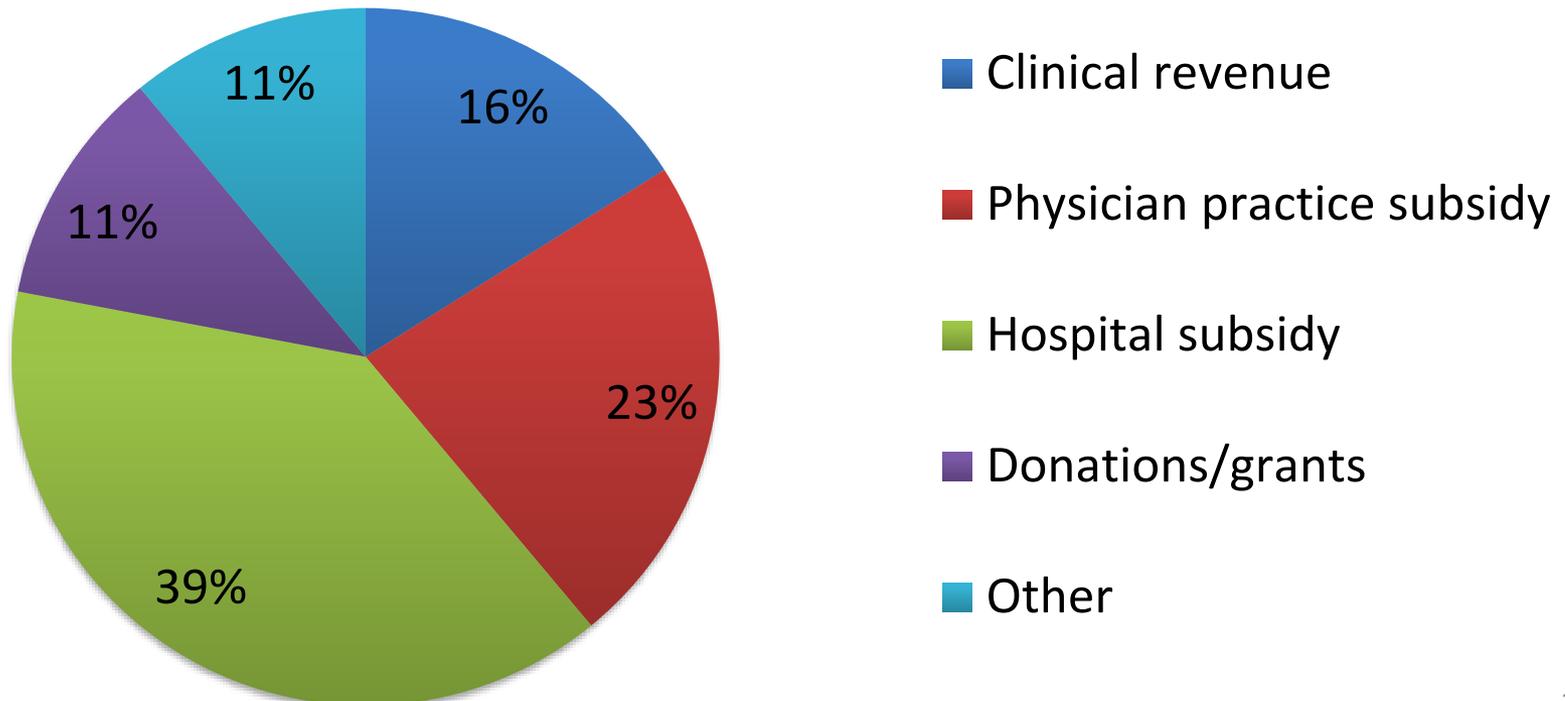
Outpatient PC, which is usually initiated earlier in the disease-course than inpatient PC, is good for patients and can reduce utilization of expensive, invasive care in the months before death, when such care is not aligned with patient preferences.

- Brumley R et al, Increased Satisfaction with Care and Lower Costs: Results of a Randomized Trial of In-Home Palliative Care, J Am Geriatr Soc. 2007 Jul;55(7):993-1000.
- Enguidanos S et al., 30-Day Readmissions among Seriously Ill Older Adults, J Palliat Med. December 2012, 15(12): 1356-1361.
- Greer JA et al. Effect of early palliative care on chemotherapy use and end-of-life care in patients with metastatic non-small-cell lung cancer. J Clin Oncol 2012;30:394-400.
- Greer, JA et al, Effect of early palliative care on health care costs in patients with metastatic NSCLC, J Clin Oncol 30, 2012 (suppl;abstr 6004)
- Lukas L et al. Hospital outcomes for a home-based palliative medicine consulting service. J Palliat Med 2013;16:179–184.
- Temel J et al, Early Palliative Care for Patients with Metastatic Non–Small-Cell Lung Cancer, New England Journal of Medicine, 2010;363:733-42.

Clinical revenue covers only a fraction of the cost of a full multi-disciplinary team

- Goals-of-care consultations time consuming
- Some members of the inter-disciplinary team do not bill

Funding Sources for VCU PC Program



Hospital gets positive R.O.I. *

- Net financial impact of PC program at VCU Health System in FY2011: \$2.9 million (\$2,554 per case)
- Net hospital + physician group unreimbursed contribution to PC payroll at VCU Health System in FY2011: \$520,000 (\$453 per case)
- Ratio: 5.6x return-on-investment
- Confirmation: Morrison (2008) indicated 4.8 return-on-investment (that 8-hospital study did not include VCU Health System data)

* Return On Investment

Why containing costs helps hospitals for PC-relevant cases

- In systems with global budgets, like HMO-owned hospitals, safety-net systems, etc., there is a direct financial reward for providing efficient (lower cost) inpatient care
- In hospitals that have a predominantly fee-for-service (FFS) revenue model, avoiding /reducing costs has a positive effect because of the typical case mix for PC-relevant cases
 - Medicare over-represented (case rate payment)

Translating quality into finances more broadly

Quality outcome		Financial metrics
Improved satisfaction	→	<ul style="list-style-type: none"> • HCAHPS scores → VBP score → increase reimbursement
Reduced length of stay per admit	→	<ul style="list-style-type: none"> • Free up beds → other admissions → additional revenue • Greater profitability when payers using DRG (case rate) or per diem reimb
Reduced cost per day	→	<ul style="list-style-type: none"> • Greater profitability when payers using DRG (case rate) or per diem reimb
Avoid (make unnecessary) some hospitalizations	→	<ul style="list-style-type: none"> • Free up beds → other admissions → replace or increase revenue • Reduce 30-day re-admission penalty
Avoid (make unnecessary) hospitalizations near EOL	→	<ul style="list-style-type: none"> • Above two bullets • Improve 30-day mortality → VBP score → increase reimbursement
Survival, safety, quality	→	<ul style="list-style-type: none"> • Reputation → referrals • Managed care contracting → reimb • Patient, family, community, staff loyalty

PALLIATIVE CARE TRIGGER TOOL

- Code status changed to DNR
- Conflict about stopping/starting life-prolonging treatment (e.g. dialysis, chemotherapy)
- Goals of care or code status discussion needed and/ or surrogate or proxy distressed about
- decision- making
- Uncontrolled symptoms (pain, nausea, dyspnea, insomnia, fatigue, weight loss) that interfere with
- quality of life
- Marked decrease in functional status/ADLs in last 60 days
- Considering PEG tube placement
- Admitted from extended-care facility with ADL dependence or chronic care needs (St John Health System)
- ? Who can call a consult?????

We Can Improve Care and Reduce Costs by What We Do and Don't Do.

Doctors do not always make good transitions to end of life care

When a patient is dying discuss what the future holds.

Wright A et al. JAMA
300:1665-1673, 2008

Only 37% had that discussion. If they did...

- No difference in mental health or worry;
- 52% as likely to have heroic measures
- 4% ventilation
- 27% ICU
- 3.46 x DNR
- 2x hospice

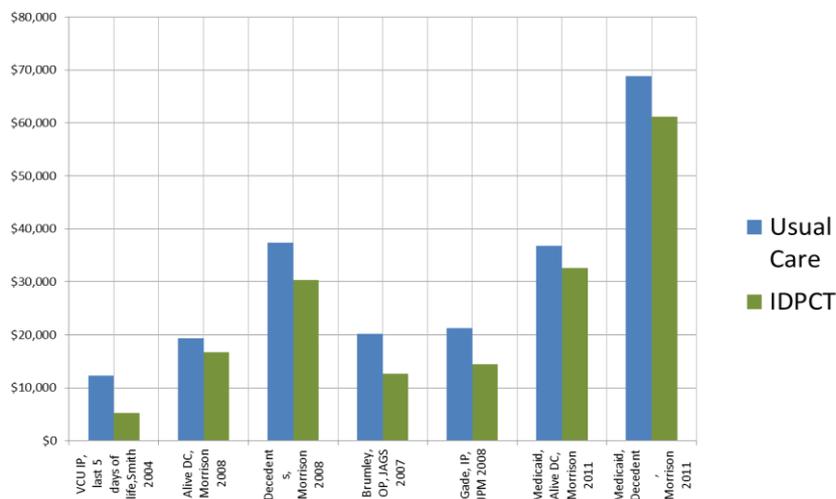
Smith TJ, Hillner BE. Bending the cost curve in cancer care.
N Engl J Med. 2011; May 26;364(21):2060-5.

As of 2019, 72% of hospitals with fifty or more beds report a palliative care team, up from 67% in 2015 and 7% in 2001. These hospitals currently serve 87% of all hospitalized patients in the U.S., an increase from 82% in 2015.

CAPC 2019

To Conclude Palliative Care Studies Show Reduced Costs

A number of studies show *statistically significant savings* – in addition to *better care*



Hughes M, Smith TJ. [Annu Rev Public Health](#) 2014
The Growth of Palliative Care in the United States
Vol. 35: 459-475



Comprehensive 2014 literature review of studies 2002-2011

- 46 studies in total, 31 using US data
- 5 US studies examined impact of hospital-based palliative care on health-care expenditure
- Consistent results across studies finding palliative care was associated with significantly lower inpatient costs

Palliative Med February 2014 vol. 28 no. 2 130-150

Palliative Care Value Proposition Pyramid





Why Palliative Care is a Solution

- **Improves patients' quality of life**
 - ✓ Reduces pain and other symptoms
 - ✓ Addresses patients' goals
- **Improves family satisfaction/well-being**
- **Reduces resource utilization and costs**
 - ✓ Matches treatments to goals
 - ✓ Allows provision of higher quality care in appropriate, often less costly, settings

The randomized trial evidence for PC alongside usual care:

Brumley R, Enguidanos S, Jamison P, Seitz R, Morgenstern N, Saito S, McIlwane J, Hillary K, Gonzalez J. Increased satisfaction with care and lower costs: results of a randomized trial of in-home palliative care. *J Am Geriatr Soc.* 2007 Jul;55(7):993-1000.

Gade G, Venohr I, Conner D, McGrady K, Beane J, Richardson RH, Williams MP, Liberson M, Blum M, Della Penna R. Impact of an inpatient palliative care team: a randomized control trial. *J Palliat Med.* 2008 Mar;11(2):180-90. doi: 10.1089/jpm.2007.0055.

Bakitas M, Lyons KD, Hegel MT, Balan S, Brokaw FC, Seville J, Hull JG, Li Z, Tosteson TD, Byock IR, Ahles TA.

Effects of a palliative care intervention on clinical outcomes in patients with advanced cancer: the Project ENABLE II randomized controlled trial. *JAMA.* 2009 Aug 19;302(7):741-9. doi: 10.1001/jama.2009.1198. PMID: 19690306

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