Financial implications of promoting excellence in end-of-life and palliative care

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  - Lisa Shickle, MS, Analytic Services, Massey Cancer Center
- Kathleen Kerr, Dr. Steve Pantilat & others at UCSF
- Dr. Kenneth White, VCU Dept of Health Administration
- Lynn Spragens, Dr. Dave Weissman, Dr. Diane Meier at Center to Advance Palliative Care (CAPC)
- Other Palliative Care Leadership Centers
  http://www.capc.org/palliative-care-leadership-initiative/overview

Current state

Health care for patients with advanced illness is marked by:

- Fragmented multi-specialty care; no one in charge.
- Lack of training on needs of seriously ill, including symptoms, communication, coordinated transitions.
- Lack of communication.
- Misalignment MD / hospital / payor incentives for controlling resource utilization for EOL patients.

The most recent Dartmouth Atlas Project report on cancer care finds

"…remarkable variation depending on where the patients live and receive care. Even among the nation's leading medical centers, there is no consistent pattern of care or evidence that treatment patterns follow patient preferences. Rather, the report demonstrates that many hospitals and physicians aggressively treat patients with curative attempts they may not want, at the expense of improving the quality of their last weeks and months."

http://www.dartmouthatlas.org/downloads/reports/Cancer_report_11_16_10.pdf

Cost of inpatient deaths exceeds reimbursement dramatically for Medicaid and Medicare

	# Admissions	Total Net Margin	Net Margin Per Case
All cases	1927	$ (8,004,908)	$ (4,154)
LOS 1-4 days	792	$ 3,950,096	$ 4,987
LOS 5+ days	1135	$ (11,955,004)	$ (10,533)

VCU Health System, 2003-2006. Net margin = reimbursement (inclusive of year-end funds from Medicare and Commonwealth) minus total cost.

Cassel & Lyckholm, Making the business case for palliative care in public hospitals. The Safety Net (Magazine of the National Association of Public Hospitals & Health Systems). 2007, 21 (3): 6-9. Replicated by several non-safety-net hospitals such as UCSF, Fairview Health System MN, Mt Carmel Health System OH.

PC-relevant admissions amidst hospital's total volume

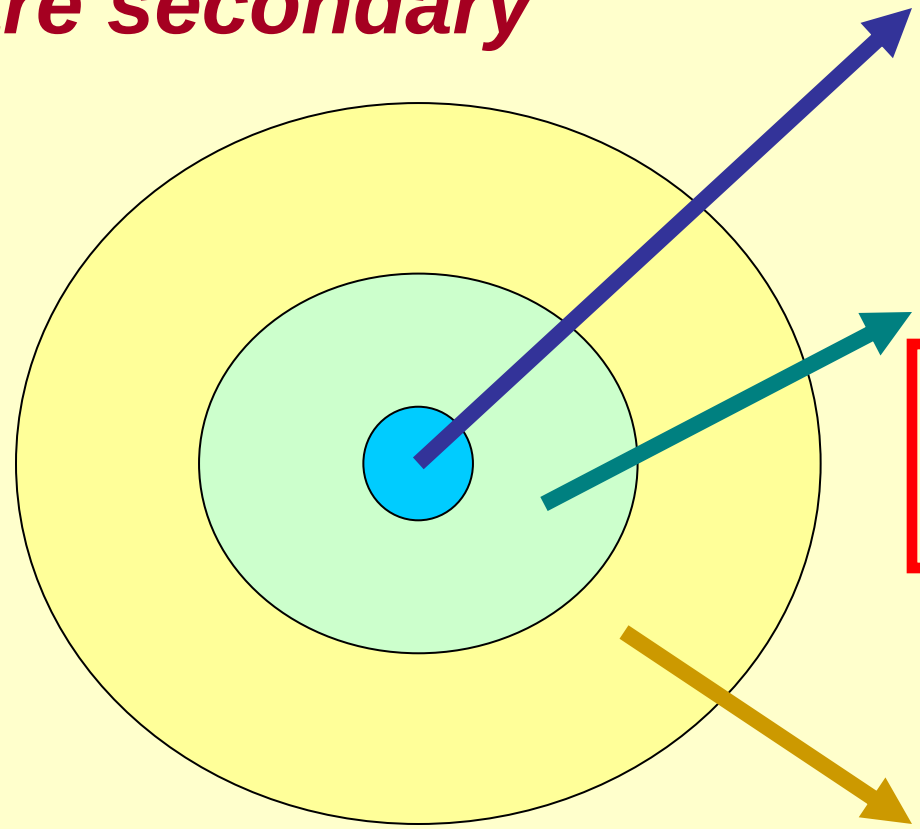
200-bed community hospital in California

	Deaths	Live discharges from high-mortality DRGs	Other live discharges
Cases	3%	11%	86%
LOS	12.3	8.2	4.6
Costs/Case	$23,619	$15,785	$8,226
Costs/Day	$1,920	$1,925	$1,788

PC-relevant patients are not the most numerous, but often have lengthy and costly admissions compared to others

Source: Kathleen Kerr, UCSF. Presented in CAPC Audioconference, March 14, 2007

Palliative Care: Financial outcomes are secondary



Primary impact is on patient

A. relief of pain and other symptoms

B. clarification of prognosis and goals of care

C. may result in changes to kind of care provided

Secondary impact: if A-C achieved

D. family – less confusion, more appreciative

E. nurses, doctors – appreciate specialist help

F. ICU utilization – some pts shift to acute m/s

G. costs – reduced if care is more PC-specific

H. revenue – reduced if PC reduces procedures or admissions

Tertiary impact: if D-H achieved

I. more access to ICU? less hospital diversion?

J. improve nurse, MD satisfaction, less burnout?

K. hospital reputation changes? awards?

L. philanthropy increases?

M. culture changes in hospital and community?

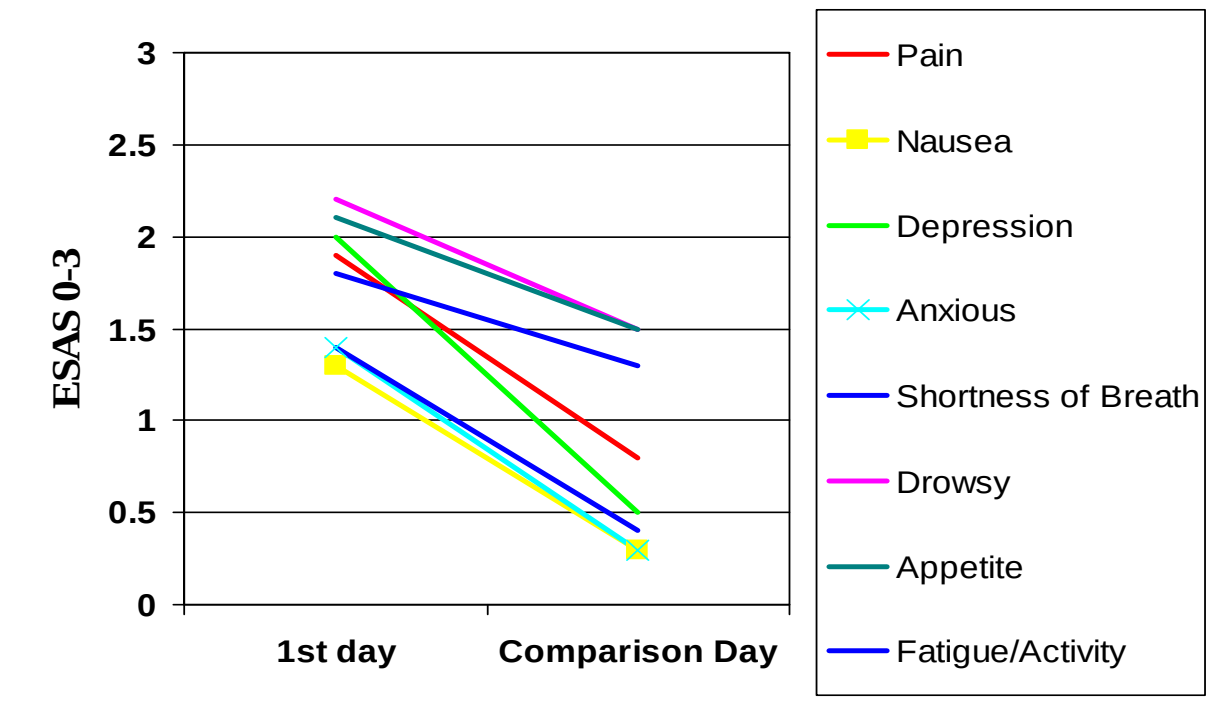
N. better for payors, society?

Cassel & Kerr (2007). "Measuring the impact of palliative care: Hospital, patient, and provider perspectives". U Illinois - Chicago.

Symptoms Reduced Following Palliative Care

Palliative Care patients' symptom assessments 2010

n=35	Time1	Time2
# with no signif symptoms	0	17
# with 1 signif symptom	6	6
# with 2 signif symptoms	5	2
# with 3 signif symptoms	9	6
# with 4+ signif symptoms	15	4



Khatcheressian, Cassel, Lyckholm, Coyne & Smith. Oncology, September 2005

PC is good, but is that enough reason for hospitals to invest in it?

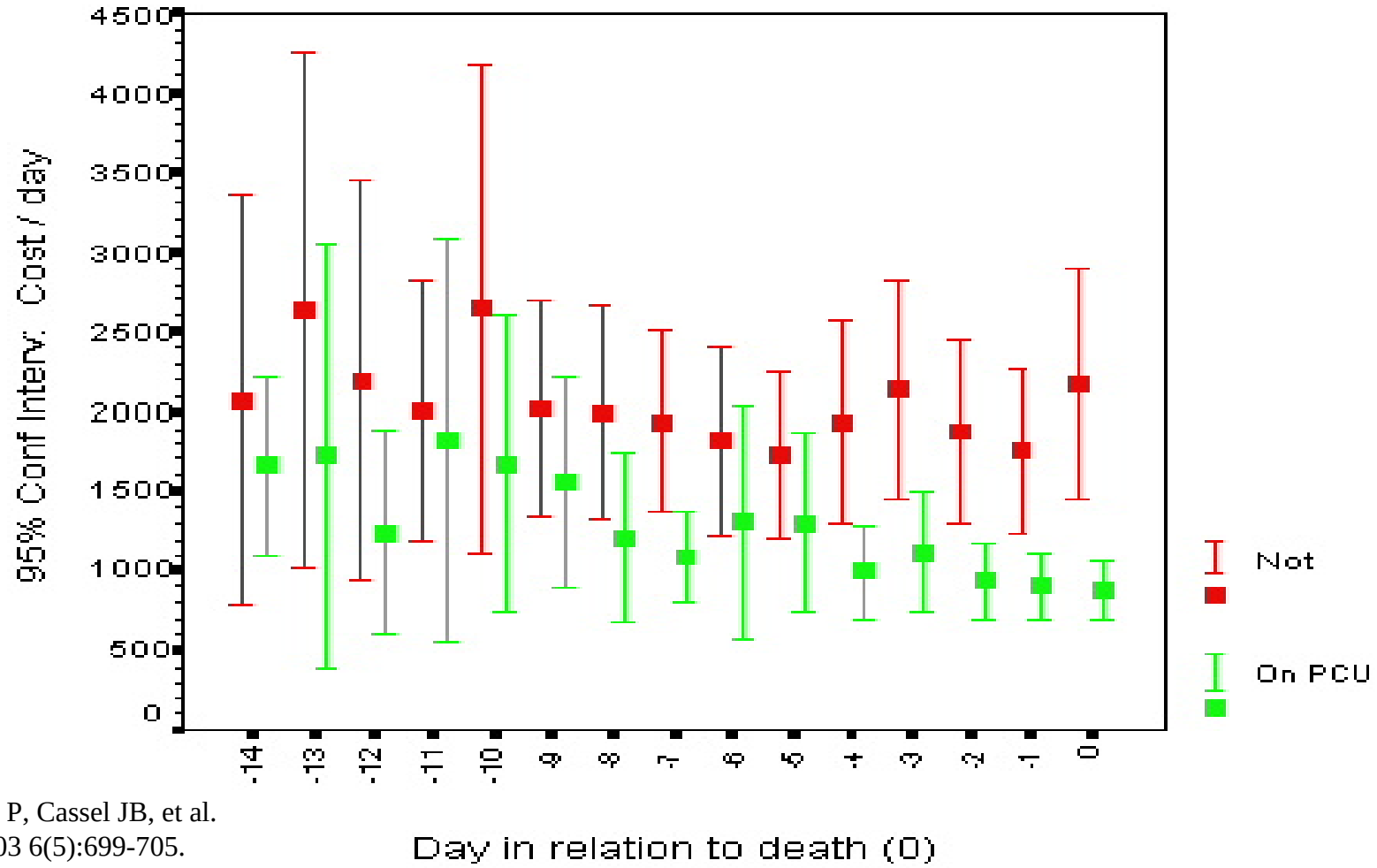
Insufficient clinical revenue generated by PC providers to fund multi-disciplinary PC team(s)

How would hospitals benefit?

- Better care for patients, families
- Improved patient and family satisfaction
- Improved satisfaction of other providers
- Cost reduction when payment is fixed
- Increased flow/access especially in ICUs
- Regulatory carrots and sticks

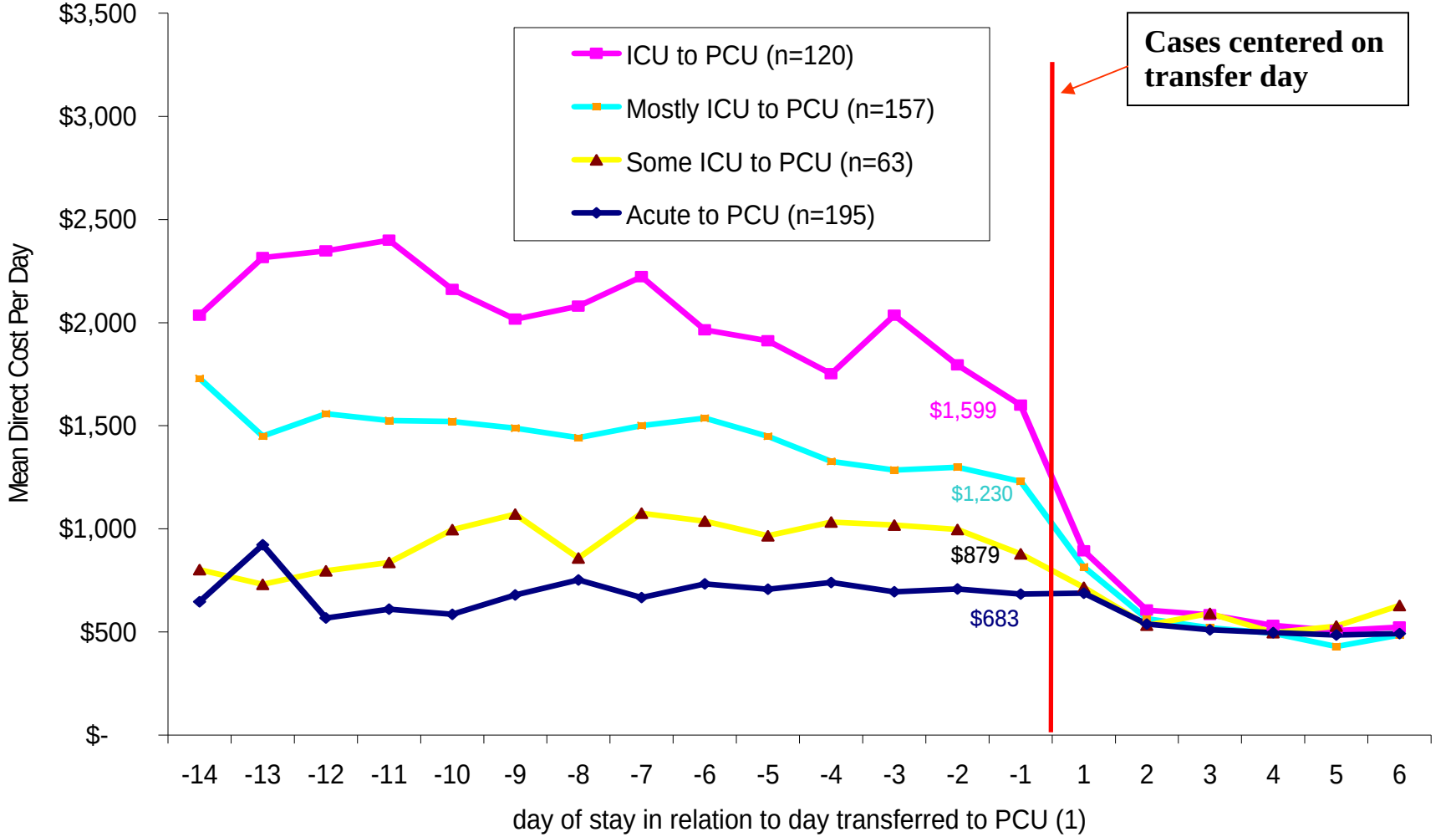
First cost-reduction study (JPM 2003)

	Control, Non-PCU	PCU	*p* value
Direct Costs / Day	$1,441	$632	0.004



Smith TJ, Coyne P, Cassel JB, et al.
J Palliat Med 2003 6(5):699-705.

Typical PC Cost Reduction Outcomes



KR White, KG Stover, JB Cassel, TJ Smith. (2006). Non-Clinical Outcomes of Hospital-Based Palliative Care. *Journal of Healthcare Management 51* (4), 253-267.

PCLCs' cost avoidance analyses

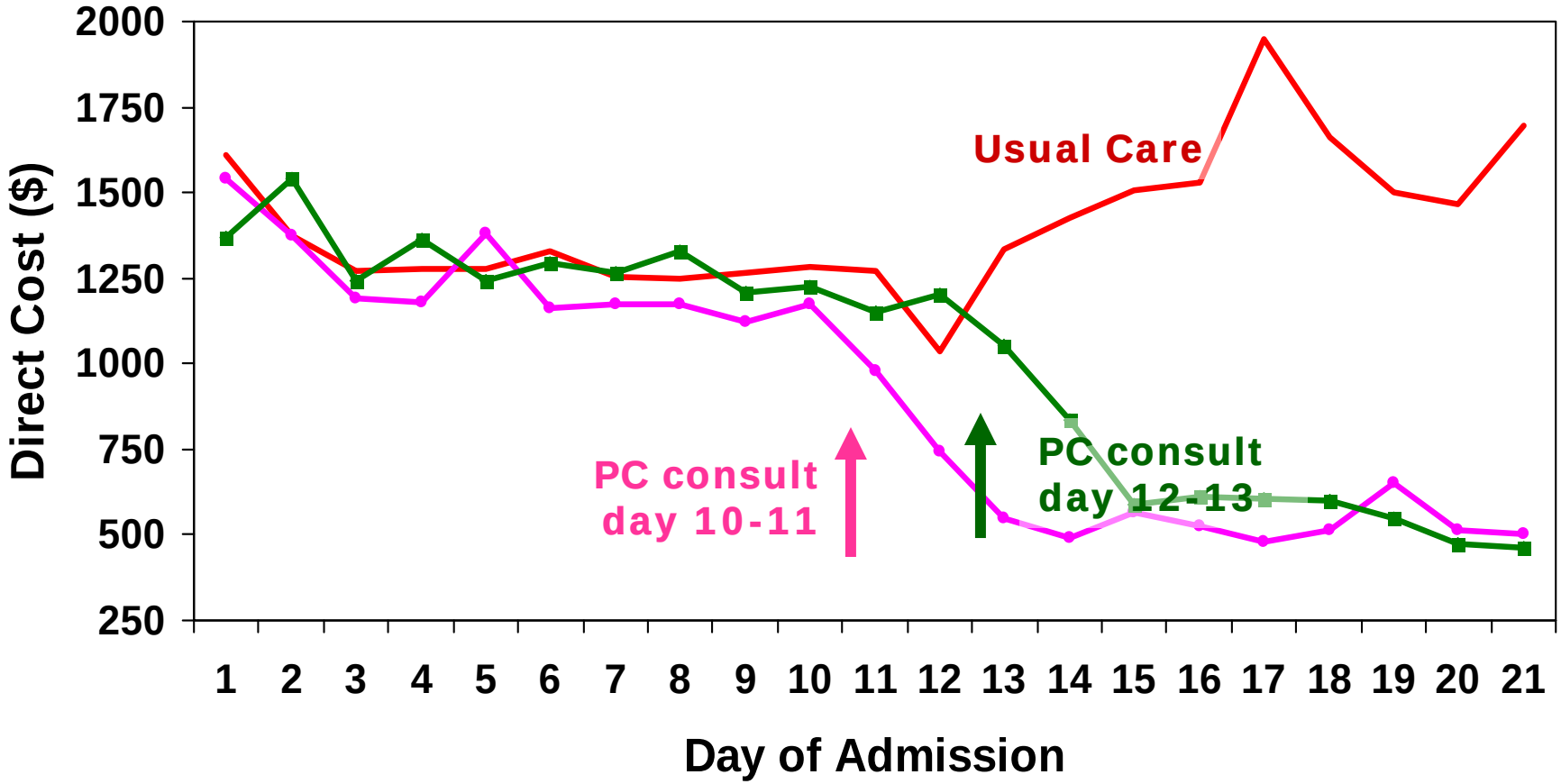
PCLC Site	Cost measures	% or $ saved post-PC per day	PC LOS	Cases	Total per year
Central Baptist (Affiliated with Bluegrass)	Variable	42% or $432 per day	5.7	423	> $1million
Fairview (3 hospitals)	Variable Direct	$204 - $479 per day (lowest = 13% per day)	4-11	120-338	$287,000 - $427,000
MCW / Froedtert Hosp.	Direct (Total / 2)	44% per day	3	580	> $650,000
Mt Carmel (3 hospitals)	Variable	25% or $240 per day	3.6	1,720	> $1.5million
UCSF	Variable	45-60% or $691 per day	3.3	350	> $760,000
VCU	Direct	40-50% per day	6	450	> $730,000

8 Hospital Study of Palliative Care

Direct cost per day	Survivors	Decedents	
48 hours before PC	$843	$1,163	
48 hours after PC	$605	$589	**Average**
Difference	$238 (28%)	$574 (49%)	$406

Morrison, Penrod, Cassel et al. (2008). Cost savings associated with US hospital palliative care consultation programs. Archives of Internal Medicine 168 (16), 1783-1790.

8 Hospital Study of Palliative Care



Morrison, Penrod, Cassel et al. (2008). Cost savings associated with US hospital palliative care consultation programs. Archives of Internal Medicine 168 (16), 1783-1790.

Whose costs are reduced?

- Cost reduction in the last 4 days of a 20-day hospitalization may save the hospital some costs. But late-in-the-game interventions do not translate to reducing Medicare expenditures, as the MS-DRG was established by the disease, acuity and procedures already conducted in first 8-16 days. The amount paid by Medicare is not affected by cost reduction at the end of the admission (except for a tiny reduction in outlier payments).

- However, cost avoidance through intervention in ED, or by avoiding the high-cost mortality admission altogether, or avoiding multiple admissions toward EOL, can have significant savings for Medicare or other ultimate payors.

- Of course some avoided admissions may have been profitable for a hospital (if LOS was minimal), so again we are faced with competing incentives.

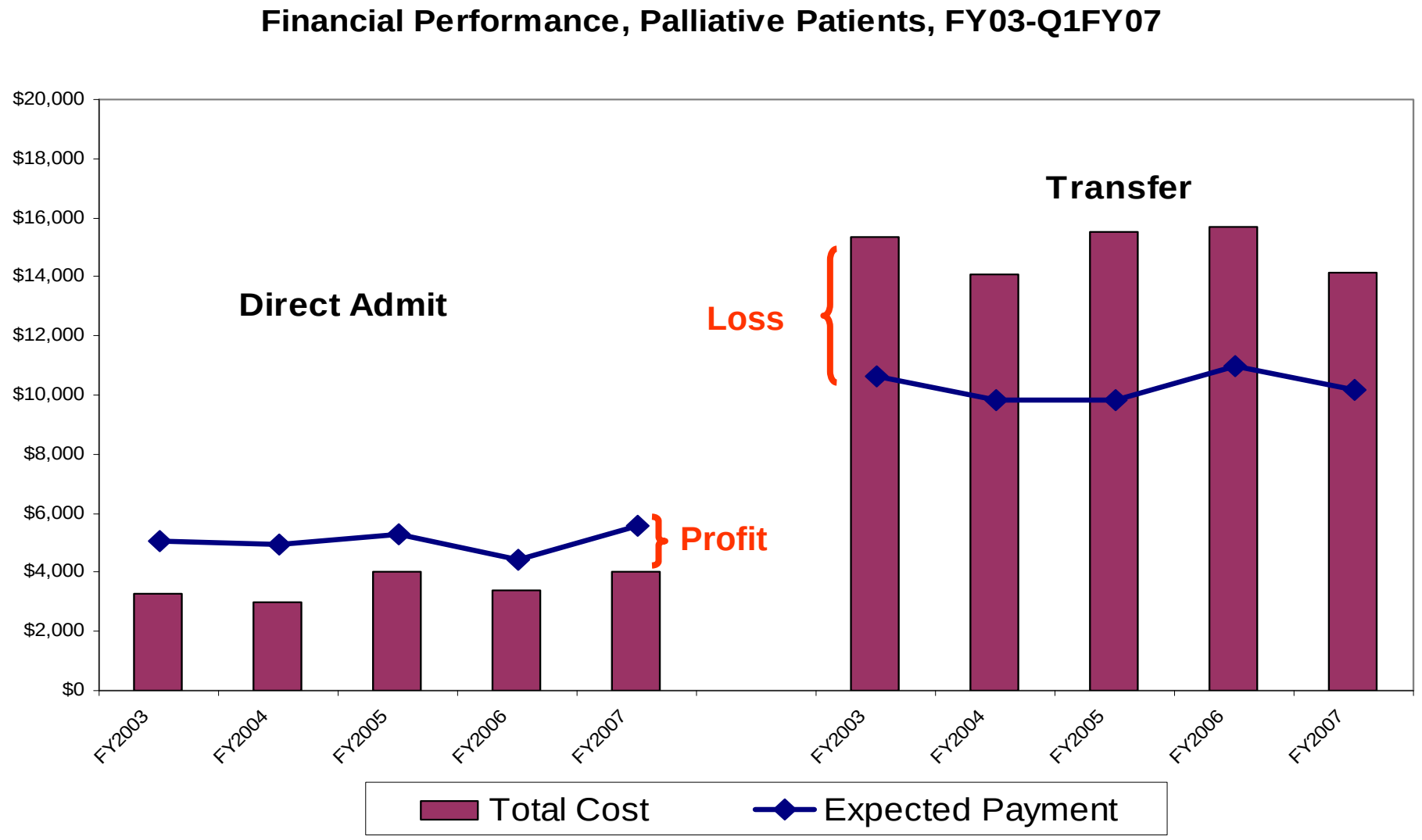
PC in ED influences whole hospitalization – and therefore revenues as well as costs

- A 41 y/o woman with Stage IV breast cancer seen in ED for severe dyspnea from lung metastases. She was seen by PC, improved with nebulized fentanyl, and admitted to the PCU for aggressive dyspnea management. The alternative under consideration was intubation and ICU admission. She improved and was discharged home with hospice.
- 67 y/o man with Stage IV, extensive lung cancer; debilitated, septic and having trouble breathing, admitted to ED. Seen by PC as well as ICU team. Admitted to ICU but after 2 days of ICU care, family asked for PC consultants to return; they had thought about what was offered and wanted to transfer the patient out of ICU to PC unit for continued life support, but outside of an ICU.

JB Cassel & LJ Lyckholm (2007). Rethinking our M.O. *Journal of Palliative Medicine 10* (3), 649-650.

LJ Lyckholm, JB Cassel, S Hickey (2007). Palliative Care Consultation in the Emergency Department. AAHPM. Salt Lake City, UT.

Early contact affects cost more than revenue



Data from Mt Carmel health system, Columbus OH

Operational impact: Do PC consultations reduce ICU length of stay?

Impact on ICU LOS

Study	N	% Died	Intervention		Usual Care		*p*
			N	Mean	N	Mean	
Communication Intervention Studies							
Ahrens 2003	151	87%	43	6.1	108	9.5	.009
Lilly 2000 – decedents	100	100%	69	5.12	31	11.07	.02
Lilly 2000 – survivors	29	0%	20	7.75	9	6.89	.8
Ethics Intervention Studies							
Dowdy 1998 – decedents	36	100%	21	14.9	15	21.3	NR
Dowdy 1998 – survivors	26	0%	10	18.2	16	25.3	NR
Schneiderman 2000	42	100%	21	4.2	21	13.2	.03
Schneiderman 2003 – decedents	329	100%	173	6.42	156	7.86	.03
Schneiderman 2003 – survivors	217	0%	103	11.3	114	12.6	>.5

Impact on ICU LOS

Study	N	% Died	Intervention		Usual Care		*p*
			N	Mean	N	Mean	
Palliative Care Intervention Studies							
Campbell 2003 – GCI pts	38	100%	20	3.7	18	7.1	<.01
Campbell 2003 – MOSF pts	43	100%	21	10.4	22	10.7	.735
Campbell 2004	52	60%	26	3.5	26	6.8	<.004
Hanson 2008	1917	43%	104	2.4	1813	3.4	.35
Mosenthal 2008	94	100%	52	6.1	42	7.6	NR
Norton 2007	191	55%	126	8.96	65	16.28	.0001
Penrod 2006	314	100%	82	4.0	232	9.3	.007
Smith 2003	76	100%	38	1.53	38	3.58	.522

Other PC studies (e.g., Morrison 2008; Gade 2008) have also demonstrated significant ICU impact but did not measure this in terms of ICU days.

Impact on total LOS?

- Research to date has not demonstrated consistent impact on LOS outside of ICUs
- Typical PC program will not have ability to measure & quantify LOS impact
- PC programs should not promise to reduce total LOS
- See JB Cassel, K Kerr, S Pantilat, TJ Smith (2010). ”Palliative care and hospital length of stay”. *J Palliat Med 2010;13* (6):761-767

Late-consult cost-reduction impact:

Necessary, but insufficient, as measure of PC financial impact

- Up to five analyses necessary to develop a comprehensive estimate of PC service financial outcomes
  - *Reduced Daily Costs*
  - *Avoided Escalation*
  - *Savings from Early Engagement*
  - *Avoided Mortality Admissions*
  - *Avoided Readmissions*

Kerr, Cassel & Pantilat, AAHPM, 2010 and 2011

Summary

- Much can be improved in healthcare for people with advanced illness
- Palliative care produces improvements in clinical outcomes for patients as well as financial & operational outcomes for hospitals
- Cost-reduction following PC intervention has been demonstrated consistently in research studies and hospital financial evaluations
- ICU impact has also been demonstrated consistently
- Total hospital LOS impact has not
- Societal impact of hospital-based palliative care has yet to be determined