HOW TO USE CAPC'S IMPACT CALCULATOR

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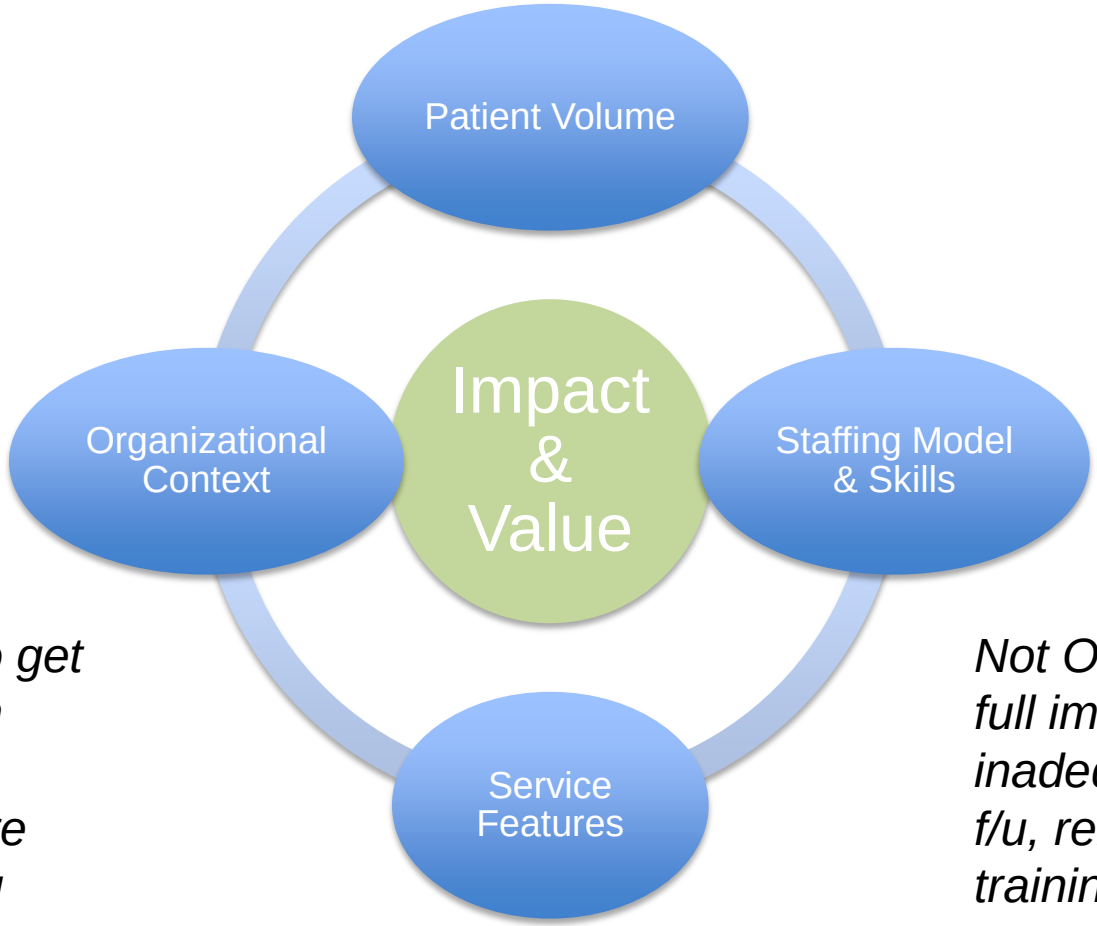
Overview/Outline

- Introduction to Key Concepts
- Demo of Impact Calculator
- Examples of Customized Use
- Discussion

Purpose of Impact Calculator

- Simple model including staffing, volume, and expected cost savings
- Illustrates leverage from scale /allows different scenarios
- Compares results to emerging national data from the National Palliative Care Registry™

Key Variables Drive Value & Impact



It is easier to get work done in some orgs. There is more "low hanging fruit" in others…

Not OK to claim full impact where inadequate team, f/u, reliability, or training are the norm…

Recommended Approach

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What does your hospital need to know?

- ➔Are we enhancing value?
- ➔Are we working efficiently?
- ➔Are there additional opportunities?

This can help with evaluating each of these.

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Impact Calculator Demo

- Scenario 1:
  - 30,000 admissions
  - 1,000 consults
  - 6 FTES

- Scenario 2:
  - 30,000 admissions
  - 1,500 consults
  - 10 FTEs

https://www.capc.org/impact-calculator/

National Palliative Care Registry™

- Excellent source of comparative data and trends
- Good reference points; still not “benchmarks”
- Lagging indicators for staffing (2015 data reported in 2016)

USE IT!! SUBMIT TO IT. PLEASE!

➔ https://registry.capc.org/wp-content/uploads/2017/02/How-We-Work-Trends-and-Insights-in-Hospital-Palliative-Care-2009-2015.pdf

More Info on Cost Savings Estimates

ORIGINAL INVESTIGATION

Cost Savings Associated With US Hospital Palliative Care Consultation Programs

R. Sean Morrison, MD; Joan D. Penrod, PhD; J. Brian Cassel, PhD; Melissa Caust-Ellenbogen, MS; Ann Litke, MFA; Lynn Spragens, MBA; Diane E. Meier, MD; for the Palliative Care Leadership Centers' Outcomes Group

Background: Hospital palliative care consultation teams have been shown to improve care for adults with serious illness. This study examined the effect of palliative care teams on hospital costs.

Methods: We analyzed administrative data from 8 hospitals with established palliative care programs for the years 2002 through 2004. Patients receiving palliative care were matched by propensity score to patients receiving usual care. Generalized linear models were estimated for costs per admission and per hospital day.

nificant 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 $4908 in direct costs per admission ($P=.003$) and $374 in direct costs per day ($P<.001$) including significant reductions in pharmacy, laboratory, and intensive care unit costs compared with usual care patients. Two confirmatory analyses were performed. Including mean costs per day before palliative care and before a comparable reference day for usual care patients in the propensity score models resulted in similar results. Estimating costs for

Conclusion: Hospital palliative care consultation teams are associated with significant hospital cost savings.

Arch Intern Med. 2008;168(16):1783-1790

Comments on Cost Savings Estimate

- Direct costs only
- Based on most comprehensive study; reinforced in other studies
- Savings do NOT include any LOS impact or readmission impact; only inpatient costs for the single admission
- Use of ICU days is biggest lever

Article: Table 4 Adjusted Costs
(headings pasted over U.C.…)

for Live Discharges and Hospital Deaths

	Live Discharges			Hospital Deati	
Usual Care (95% CI), $	Palliative Care (95% CI), $	Net Δ	P Value	Usual Care (95% CI), $	Palliative (95% CI)
Total costs admission	5 737 (15 546-17 927)	−2642	.02	37 391 (34 952-39 830)	30 494 (28 41
Total costs per day	1171 (1082-1260)	−279	<.001	2468 (2332-2603)	1918 (1787-
Direct costs per admission	9445 (8761-10 126)	−1696	.004	22 674 (20 871-24 477)	17 765 (16 20
Direct costs per day	656 (588-723)	−174	<.001	1484 (1391-1577)	1110 (1029-
Laboratory costs	803 (712-893)	−424	<.001	2765 (2443-3086)	1838 (1588-
ICU costs	1917 (1646-2187)	−5178	<.001	14 542 (13 685-15 399)	7929 (7181-
Pharmacy costs	2001 (1821-2180)	−190	.12	5625 (4890-6361)	4081 (3530-
Imaging costs	949 (884-1014)	58	.52	1673 (1563-1782)	1540 (1433-

interval; ICU, intensive care unit.

For Possible Replication…

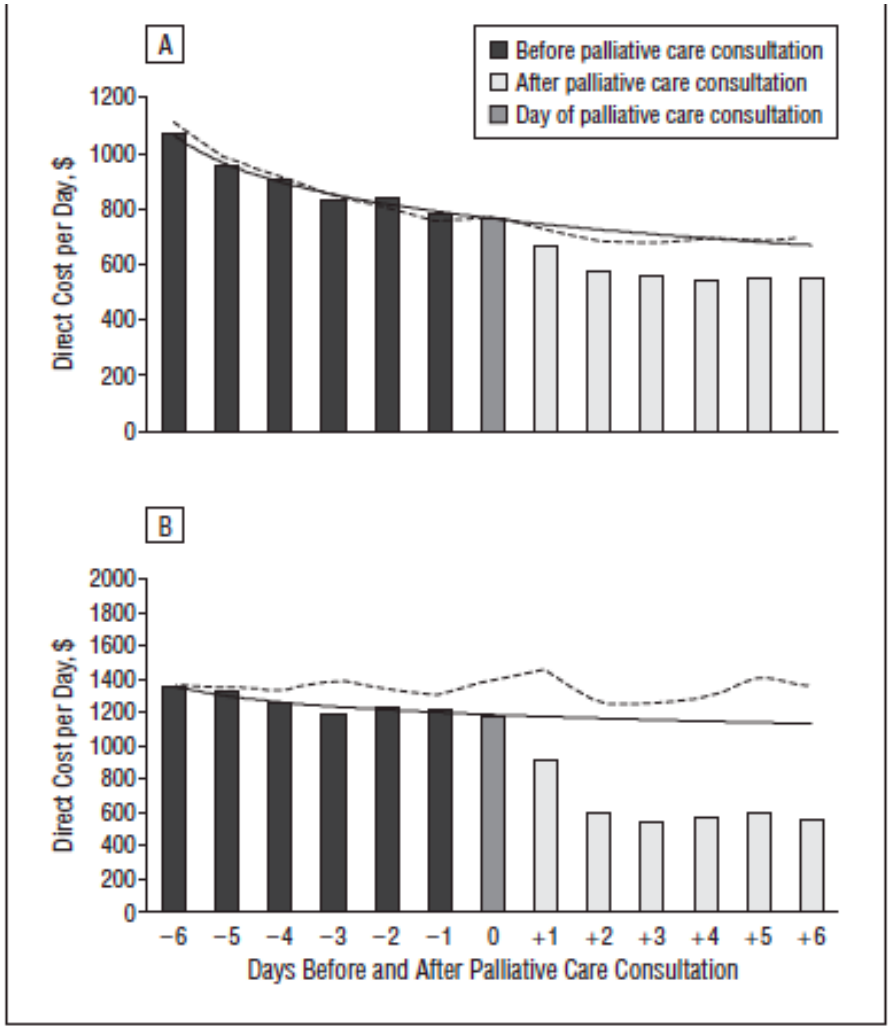

Figure 1. Mean direct costs per day for palliative care patients who were discharged alive (A) or died (B) before and after palliative care consultation.

We do NOT recommend trying to duplicate the matched study comparison of costs.

Problem: Sample size, statistical complexity, difficulty matching well.

We do think performing periodic "before and after" (like the charts to the left) spot checks of local results is useful.

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Savings ≠ Every Patient ≠ Goal

COST SAVINGS EXAMPLE: 10 Patients

	Estimated Impact (Savings)
Patient 1	$0
Patient 2	$0
Patient 3	($1,000)
Patient 4	$0
Patient 5	$2,000
Patient 6	$4,000
Patient 7	($2,000)
Patient 8	$0
Patient 9*	$30,000
Patient 10	$0
Total	**$33,000**
Average	**$3,300**

Savings in a study come from aggregate groups of patients with wide variation.

Biggest impact include change in ICU patterns.

Use your own data to tell story, show high impact examples.

$3,274 = Inflation Adjusted estimate in calculator.

Using the I.C. for modeling

VARIABLES FROM CALCULATOR WITHOUT ADJUSTMENTS				
	Scenario 1		Scenario 2	Average
Billing revenue per consult	$336.61		$336.61	336.61
Cost per FTE	$160,000		$160,000	$160,000
Cost savings per consult	$3,274		$3,274	$3,274

Description	Scenario 1: Baseline Year		Scenario 2: Year 3 or Goal	CHANGE
total admissions	30,000		30,000	0
total consults	1,000		1,500	500
total ftes	6		10	4
Estimated Team Costs	$960,000		$1,600,000	$640,000
Billing revenue	$336,610		$504,915	$168,305
Net investment	$623,390		$1,095,085	**$471,695**
Expected staff cost savings before deducting investment	$3,274,000		$4,911,000	$1,637,000
Expected annual direct cost savings (NET OF STAFFING INV.)	$2,650,610		$3,815,915	**$1,165,305**
Cost per Consult (episode of care) net of billing rev	**$623**		**$730**	**$107**
Consults per IDT FTE	167		150	17
Penetration Rate	3.3%		5.0%	QUARTILE 3
Staffing IDT per 10,000 admissions	2.0		3.3	To top quartile of lagging indicator

This version keeps assumptions constant (matches calculator).

1)Savings go up more than costs (investment).

2) New savings due to new volume = "opportunity cost" of not growing.

3) Cost per consult is MUCH less than savings.

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Customizing Staffing Costs: Price x Volume Example

Staffing Costs are a function of FTEs, Mix of disciplines, and Salary and benefit rates. Cost/consult is also impacted by consult volume.

VARIABLE: STAFFING COSTS			Scenario 1		Scenario 2	
Staffing Roles	Placeholder Full Time Salary	Salary + benefits	FTE	Year 1	FTE	Year 1
Benefit rate assumption		29%				
Physician (Includes Medical Director fte)	$210,000	$270,900	2.5	$677,250	2.5	$677,250
Nurse Practitioner	$105,000	$135,450	2.0	$270,900	2.5	$338,625
Nurse Coordinator	$90,000	$116,100	0.0	$0	1.0	$116,100
LCSW / Social Work	$65,000	$83,850	1.0	$83,850	2.0	$167,700
Chaplain	$65,000	$83,850	0.5	$41,925	2.0	$167,700
Pharmacist	$100,000	$129,000	0.0	$0	0.0	$0
Administrative Manager	$120,000	$154,800	0.0	$0	0.0	$0
Administrative Support	$60,000	$77,400	0.0	$0	0.0	$0
Total Staffing Cost			6.0	$1,073,925	10.0	$1,467,375
Average cost per fte (this changes as IDT mix changes)				$178,988		$146,738

VARIABLES FROM ADJUSTED SCENARIOS	*Scenario 2 assumes more f/u per consult & lower cost IDT mix*				*
	Scenario 1		**Scenario 2**	**Average**	
Billing revenue per consult	$300.00		$360.00	330.00	*
Cost per FTE	$178,988		$146,738	$162,863	*
Cost savings per consult	$3,274		$3,274	$3,274	
Description	**Scenario 1: Baseline Year**		**Scenario 2: Year 3 or Goal**	**CHANGE**	
total admissions	30,000		30,000	0	
total consults	1,000		1,500	500	
total ftes	6		10	4	
Estimated Team Costs	$1,073,925		$1,467,375	$393,450	
Billing revenue	$300,000		$540,000	$240,000	
Net investment	$773,925		$927,375	**$153,450**	
Expected staff cost savings before deducting investment	$3,274,000		$4,911,000	$1,637,000	
Expected annual direct cost savings (NET OF INV.)	$2,500,075		$3,983,625	**$1,483,550**	
Cost per Consult (episode of care) Net of billing rev	**$774**		**$618**	**$156**	**
Consults per IDT FTE	167		150	17	**
Penetration Rate	3.3%		5.0%	To midpoint or better	
Staffing IDT per 10,000 admissions	2.0		3.3	To top quartile of lagging indicator	

Using the I.C. as a base, with specific adjustment for average salary & expected billing revenue…

Results in lower trend in cost per consult, “in spite of” lower trend in consults per FTE.

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Examples of Actions that Add Value (and require adequate staff, mix, and training)

- Rounding on key units
- Earlier ID of patients & quick engagement
- Thorough, appropriate f/u & documentation
- Reliable communication with other providers in and out of the hospital about patient needs or goals
- Reducing /managing crises for many other clinicians
- Education & QI

Interpretation & Use

- “What if” you have high penetration and low staffing?
- “What if” you have medium penetration and higher staffing?
- Special challenges: Small hospitals
- Special challenges: Academic Centers

*Use judgment and tell your own story!

What it is not…

- The I.C. is not your budget;
  - Does not include Non Payroll Expenses
  - Does not include administrative/leadership time and ftes

- Key metric: Ensuring that your net cost per consult < the “proxy” value acknowledged by your org.

“Proxy” Value

- Likely to be < $3,274 per case…
- Assuming robust, effective program, should be > $1,600 per case
  - OK to derive from a “before & after” study
  - OK to discuss, use cases, & accept a proxy from finance
  - OK to build based on other value, like readmissions & LOS/ICU use
- Cost per case, even fully loaded, should be less than this value.

Key Points

- Finance does not have your historical/baseline savings in a drawer…
- Use the results of Impact Calculator to help you frame your own, local results

- Simple sample cases help
- NEW savings matter more
- Proxy savings at a lower level work just fine

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QUESTIONS & COMMENTS?

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