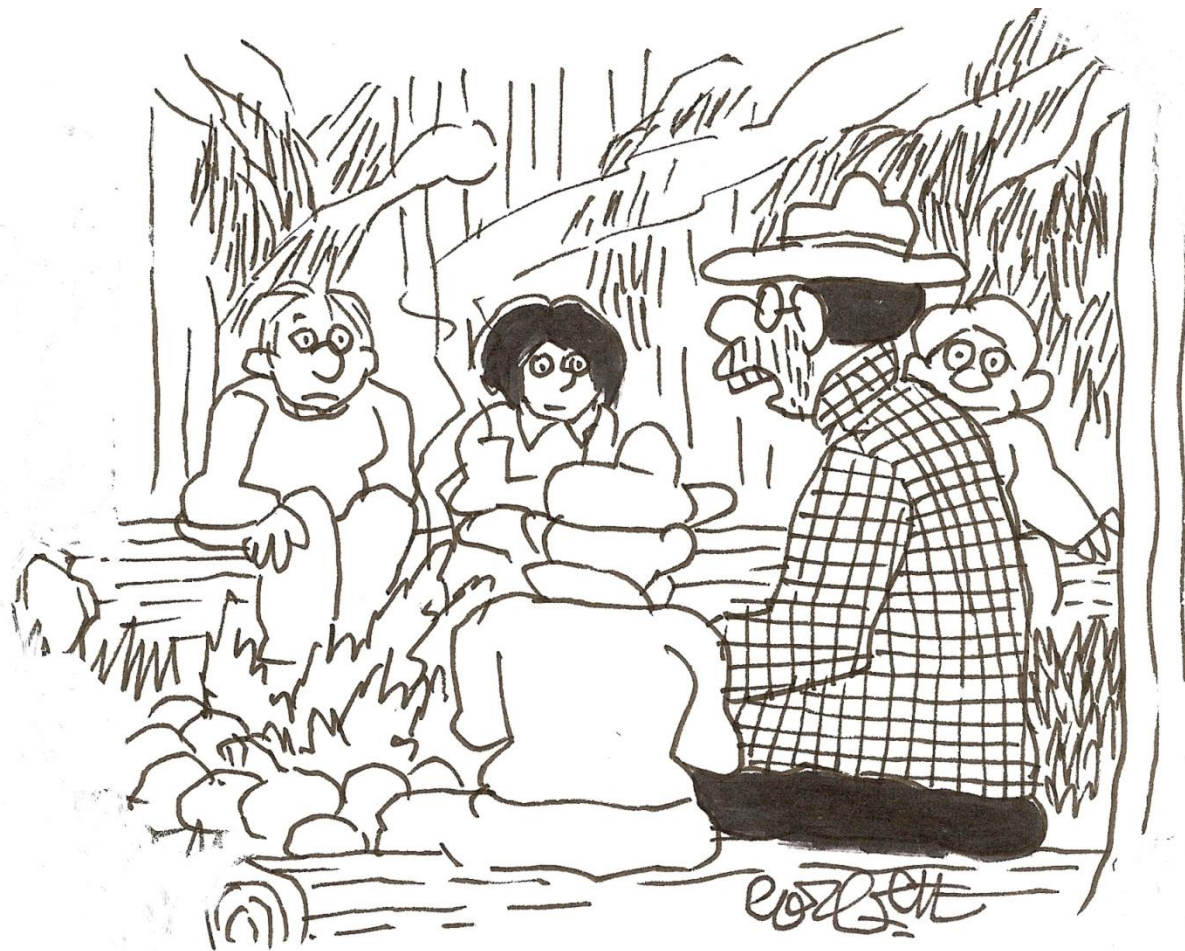


COST REDUCTION: IDENTIFYING THE OPPORTUNITIES

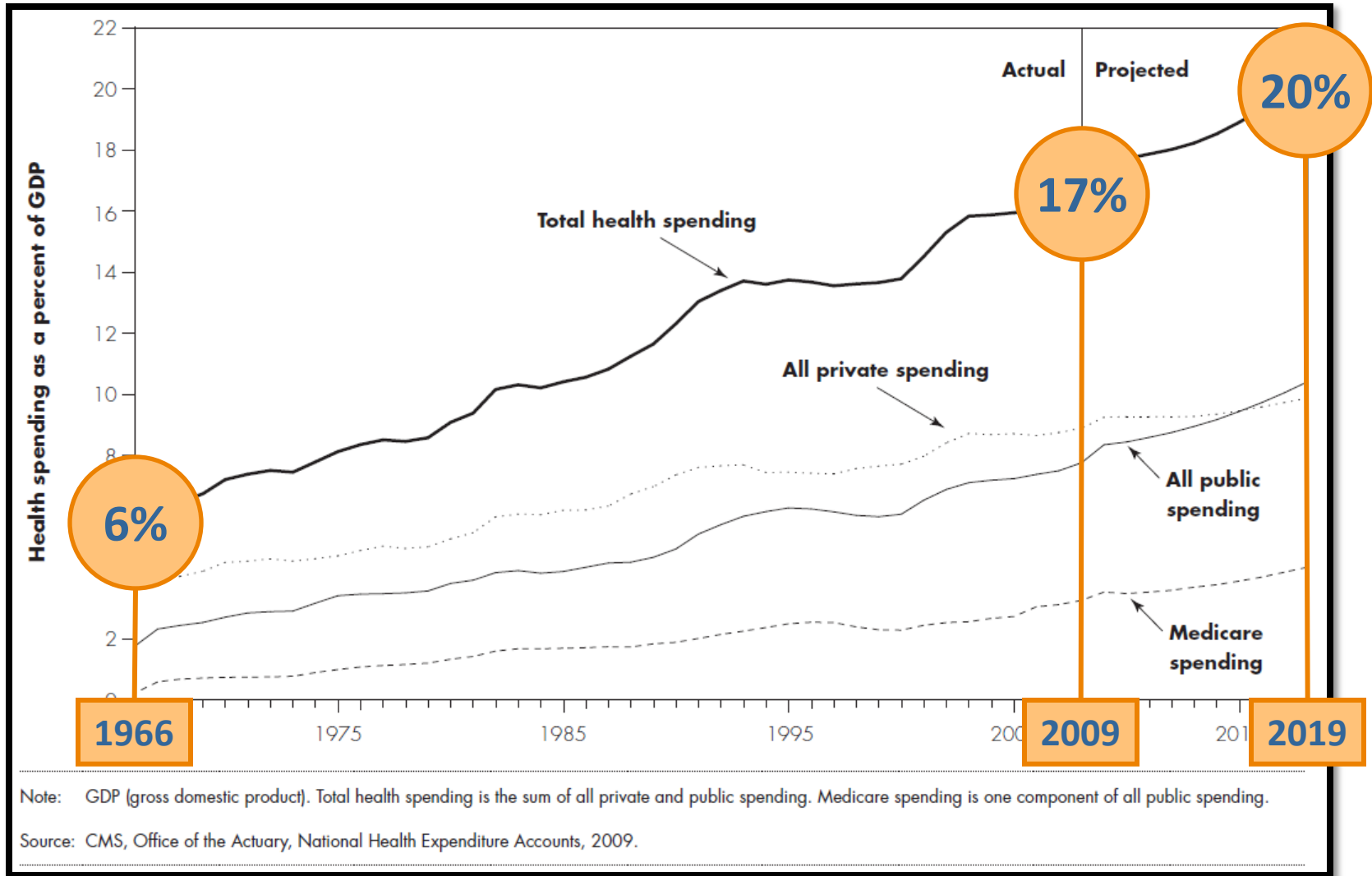
2012 Mega Conference
January 19, 2012

Presented by:
Jamie Cleverley
Cleverley + Associates



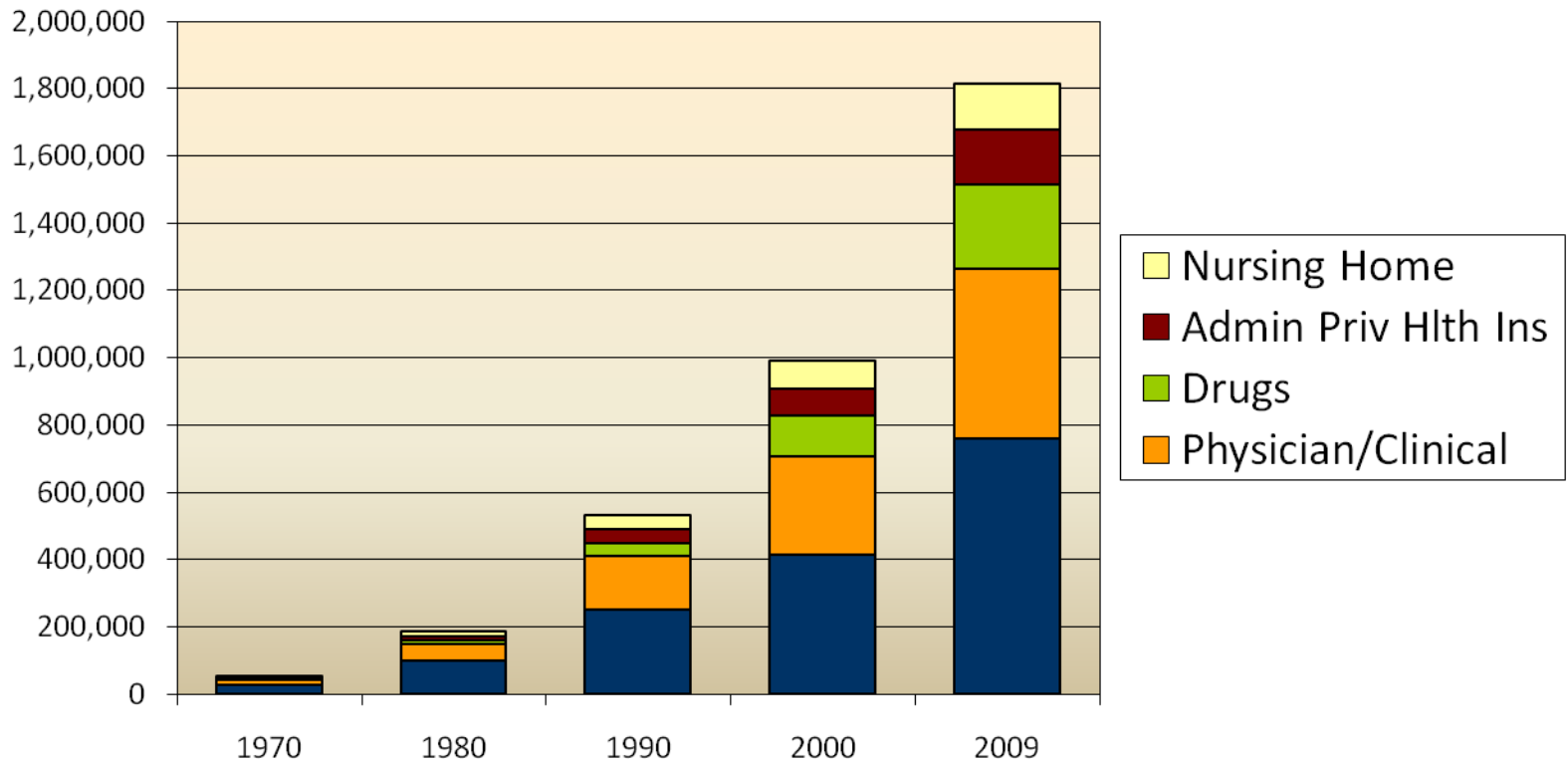
"THE SCARIEST STORY I KNOW IS ESCALATING HEALTH CARE COSTS."

Healthcare expenses are growing rapidly



Healthcare expenses are growing rapidly

National Health Expenditures (top five areas)



Healthcare expenses are growing rapidly

Annualized Change in National Health Expenditures by Area

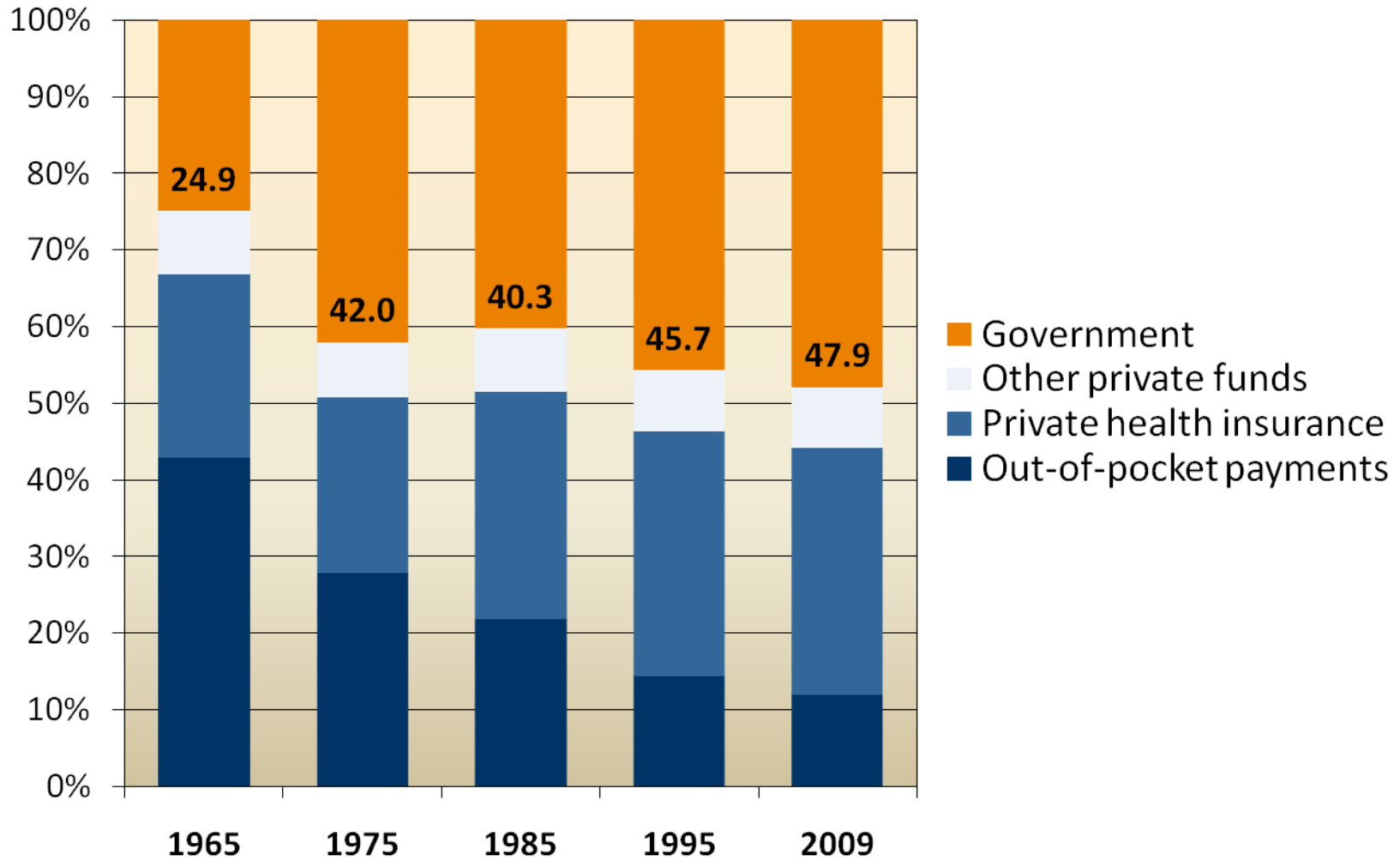
1980-1990 % Change	
Drugs	12.8%
Physician	12.8%
Admin Priv Hlth Ins	12.4%
Nursing Home	11.4%
Other	11.3%
Hospital	9.6%
Struct & Equip	9.4%
Dental	9.0%
TOTAL ALL	11.0%

1990-2000 % Chg	
Drugs	11.6%
Admin Priv Hlth Ins	7.7%
Other	6.1%
Dental	7.0%
Nursing Home	6.6%
Physician	6.2%
Struct & Equip	5.9%
Hospital	5.2%
TOTAL ALL	6.6%

2000-2009 % Chg	
Drugs	8.4%
Admin Priv Hlth Ins	8.1%
Hospital	6.9%
Other	6.5%
Physician	6.4%
Struct & Equip	6.3%
Dental	5.7%
Nursing Home	5.4%
TOTAL ALL	6.8%

Source: CMS

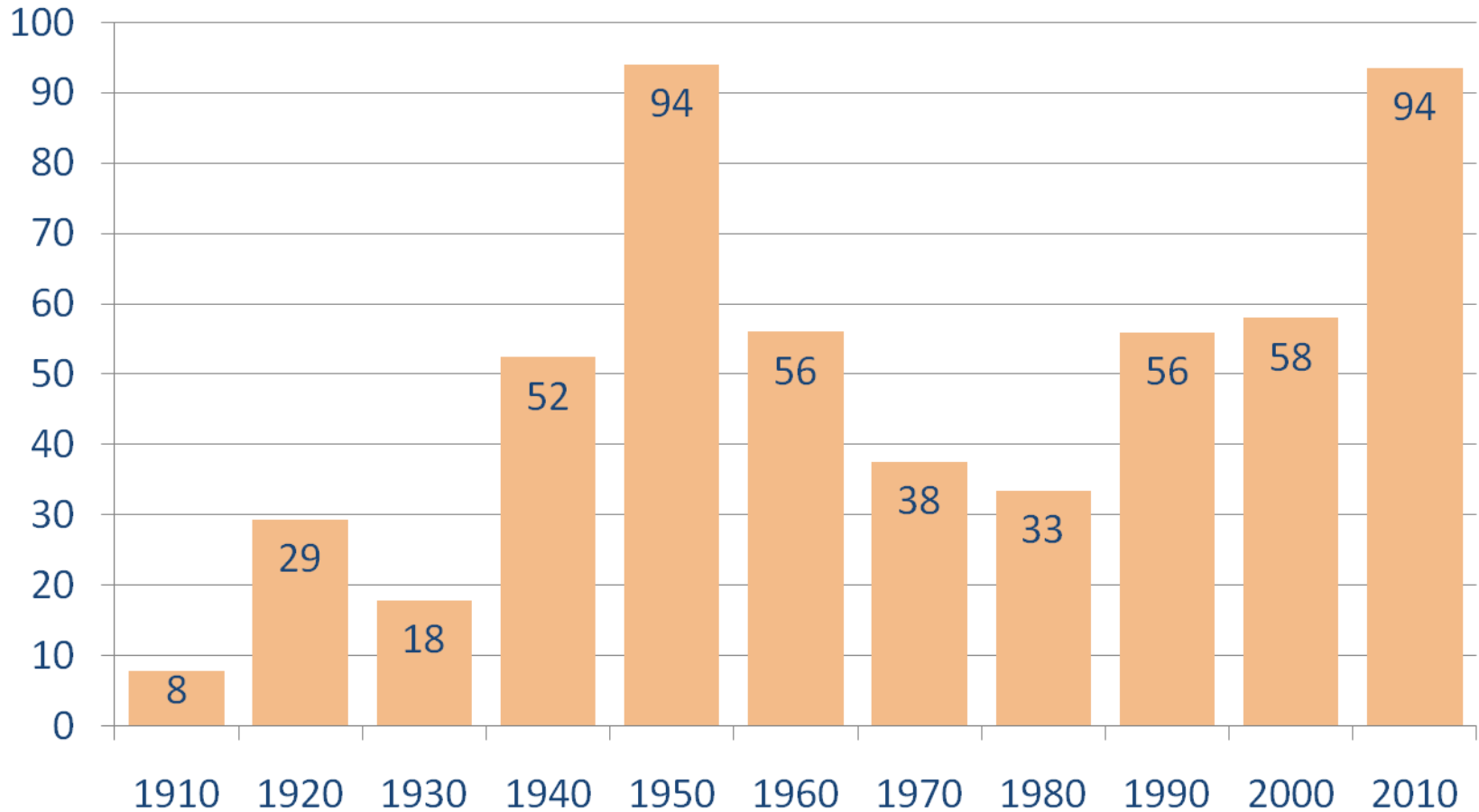
Government payers are being challenged to fund growth



Source: CMS Data Compendium

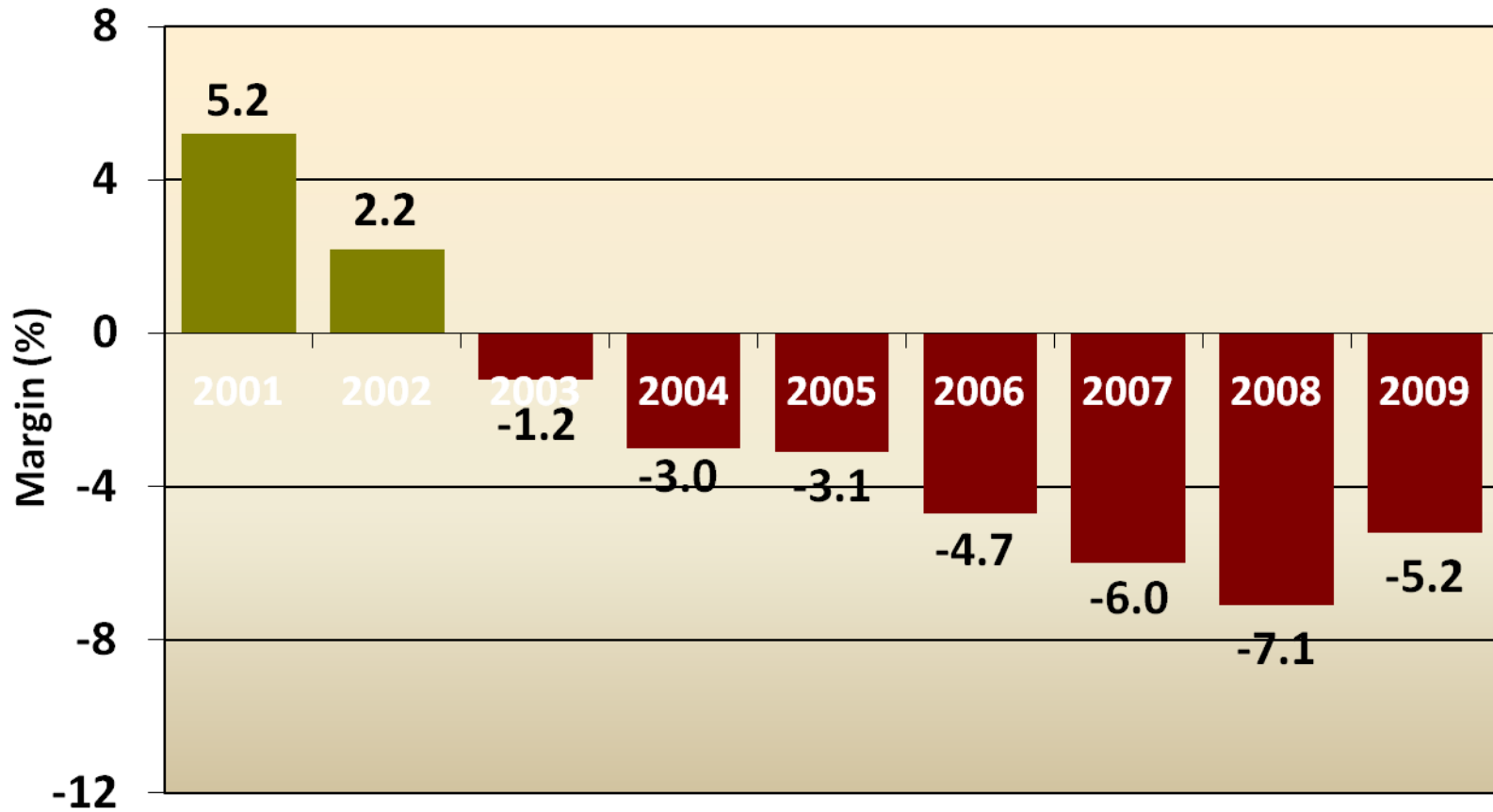
Government payers are being challenged to fund growth

Gross Public Debt as a Percentage of GDP



Margins are deteriorating in key payer areas

Overall Medicare Margins 2001-2009



Source: Medpac, "Medicare Payment Policy," March 2011

Improved margins will come through cost containment

RECOMMENDATION 3

The Congress should increase payment rates for the acute care hospital inpatient and outpatient prospective payment systems in 2012 by 1 percent. The Congress should also require the Secretary of Health and Human Services to make adjustments to inpatient payment rates in future years to fully recover all overpayments due to documentation and coding improvements.

Key points:

- Access, quality not impacted so payment ok
- Margin issues can be solved with cost containment

Source: Medpac, "Medicare Payment Policy," March 2011

RATIONALE 3

In considering its update recommendation, the Commission has struck a balance between a number of competing factors. On the one hand, average total Medicare margins are negative (–5 percent in 2009 and projected to reach –7 percent in 2011). On the other hand, our update framework indicators (access to care, including supply and service volume; quality of care; and access to capital) are positive. Furthermore, the negative Medicare margins are due at least in part to the lack of private financial pressure for cost containment, and the set of hospitals identified as efficient have a median Medicare margin of about 3 percent. On the basis of these circumstances, the Commission contemplated an update of 2.5 percent.

Today's Objectives

- 1) Determine the differences between high cost and low cost facilities
- 2) Simplify initial cost assessment through one primary performance metric
- 3) Follow logical data progressions to identify specific hospital cost opportunities
- 4) Understand how appropriate action strategies can yield performance improvement

IS THERE A COST DIFFERENCE AMONG HOSPITALS?

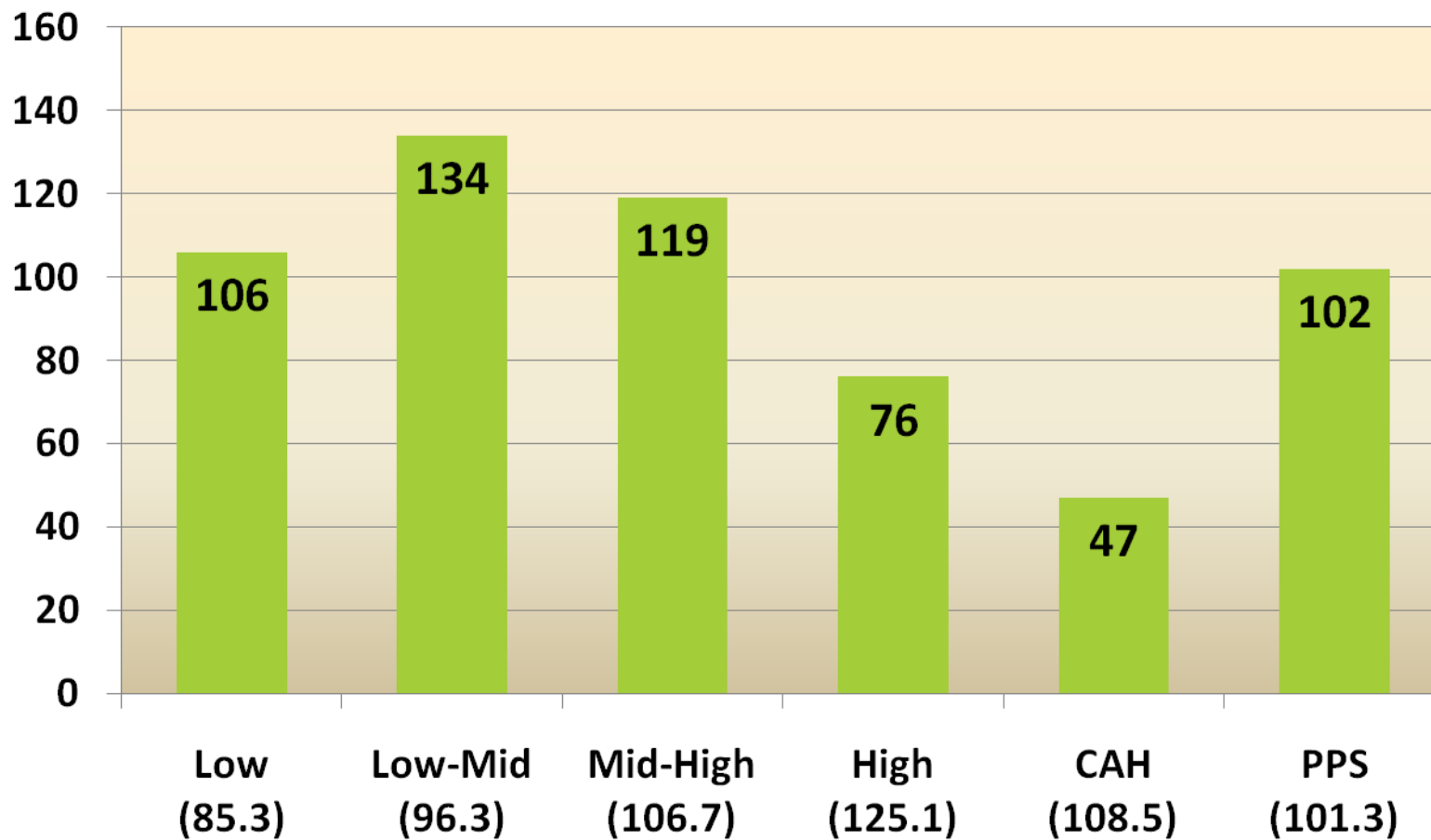
How extreme are the cost differences among hospitals?

Hospital Cost Index® Medians by Group – 2009

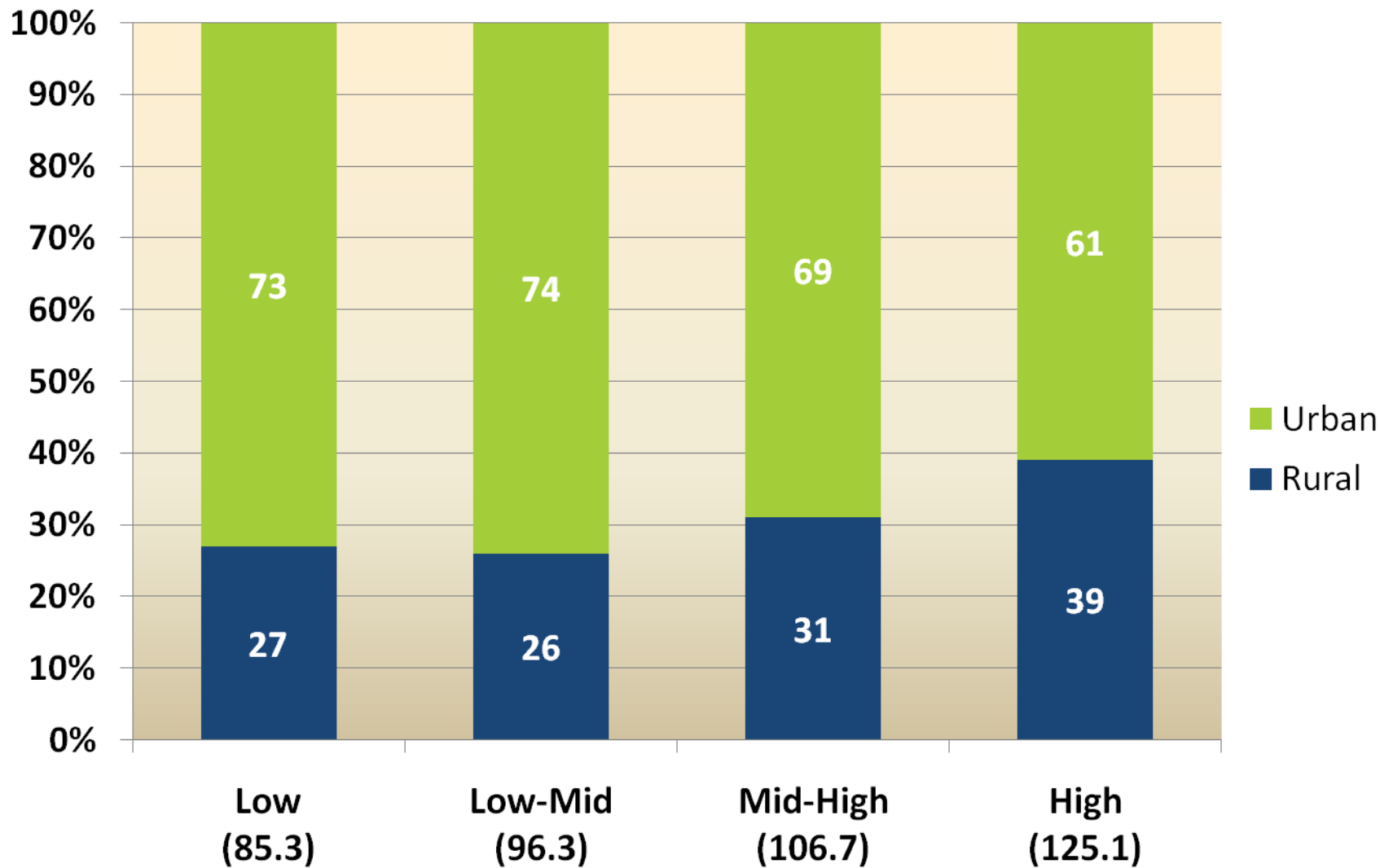
Low Cost (QTR 1 HCI)	Low-Mid Cost (QTR 2 HCI)	Mid-High Cost (QTR 3 HCI)	High Cost (QTR 4 HCI)	US CAH Hospitals	US PPS Hospitals
85.3	96.3	106.7	125.1	108.5	101.3

47% Difference b/t Low & High

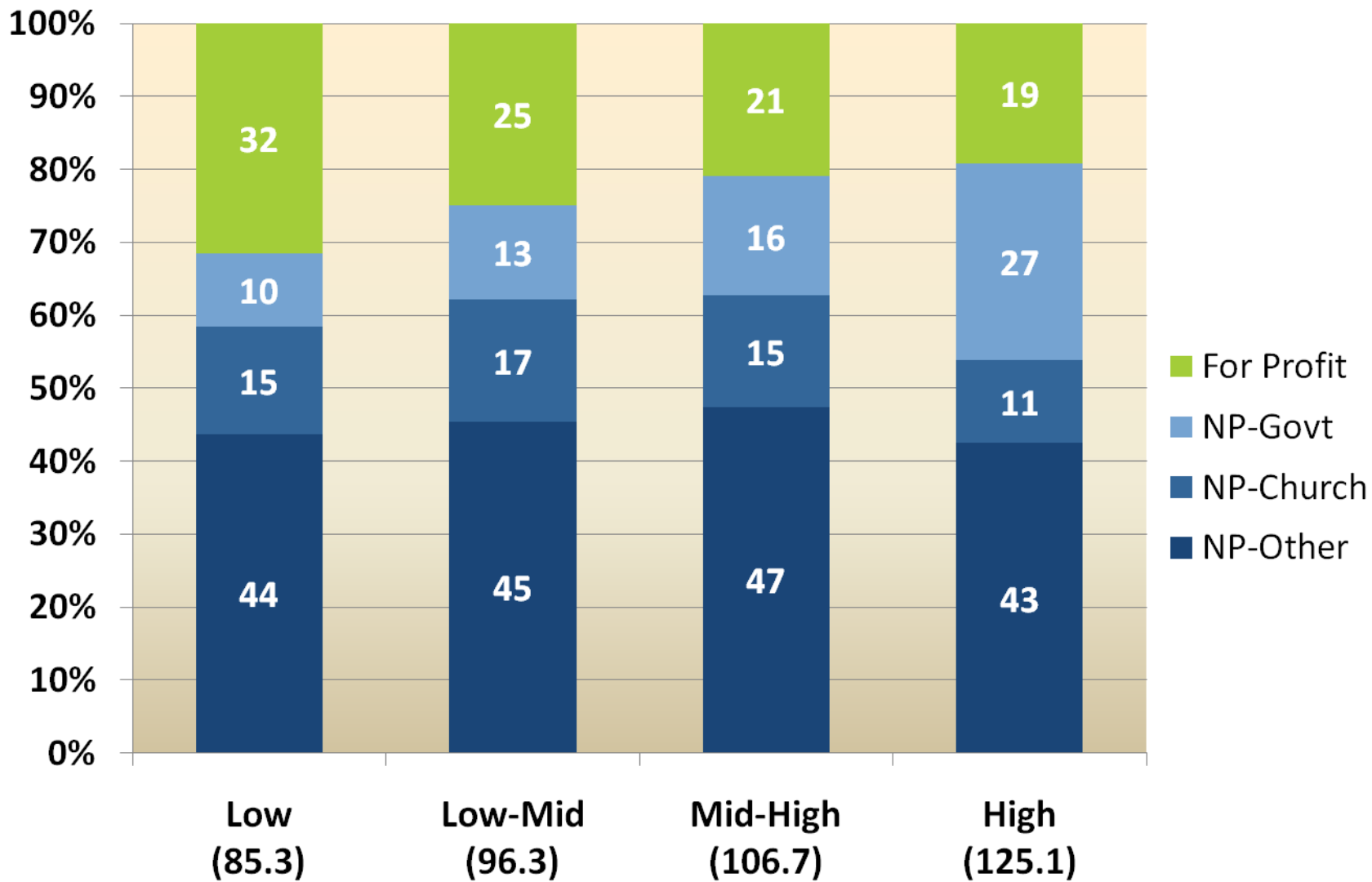
Median Net Patient Revenue (millions) by Hospital Cost Index® Quartiles



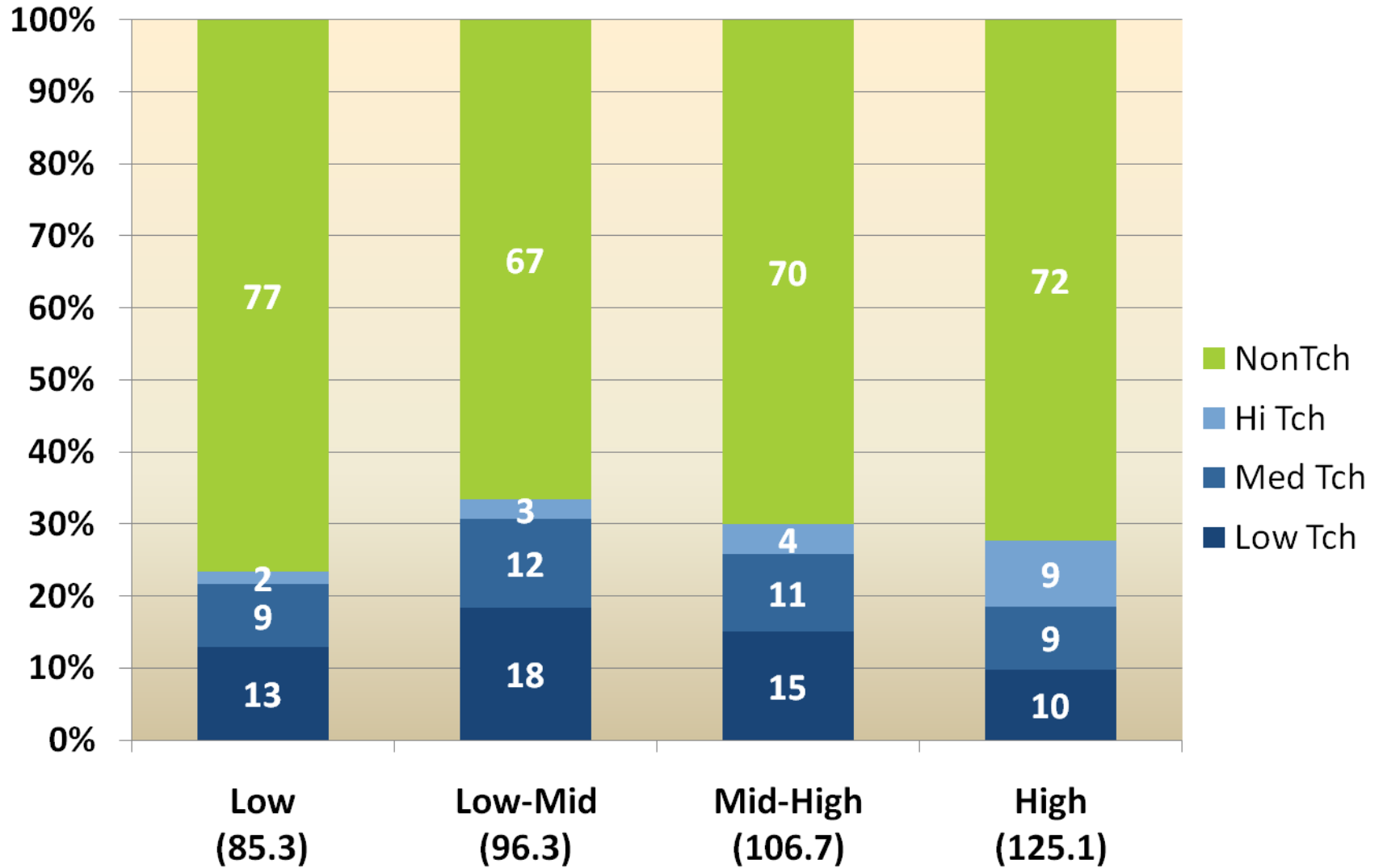
Urban/Rural Status by Hospital Cost Index® Quartiles



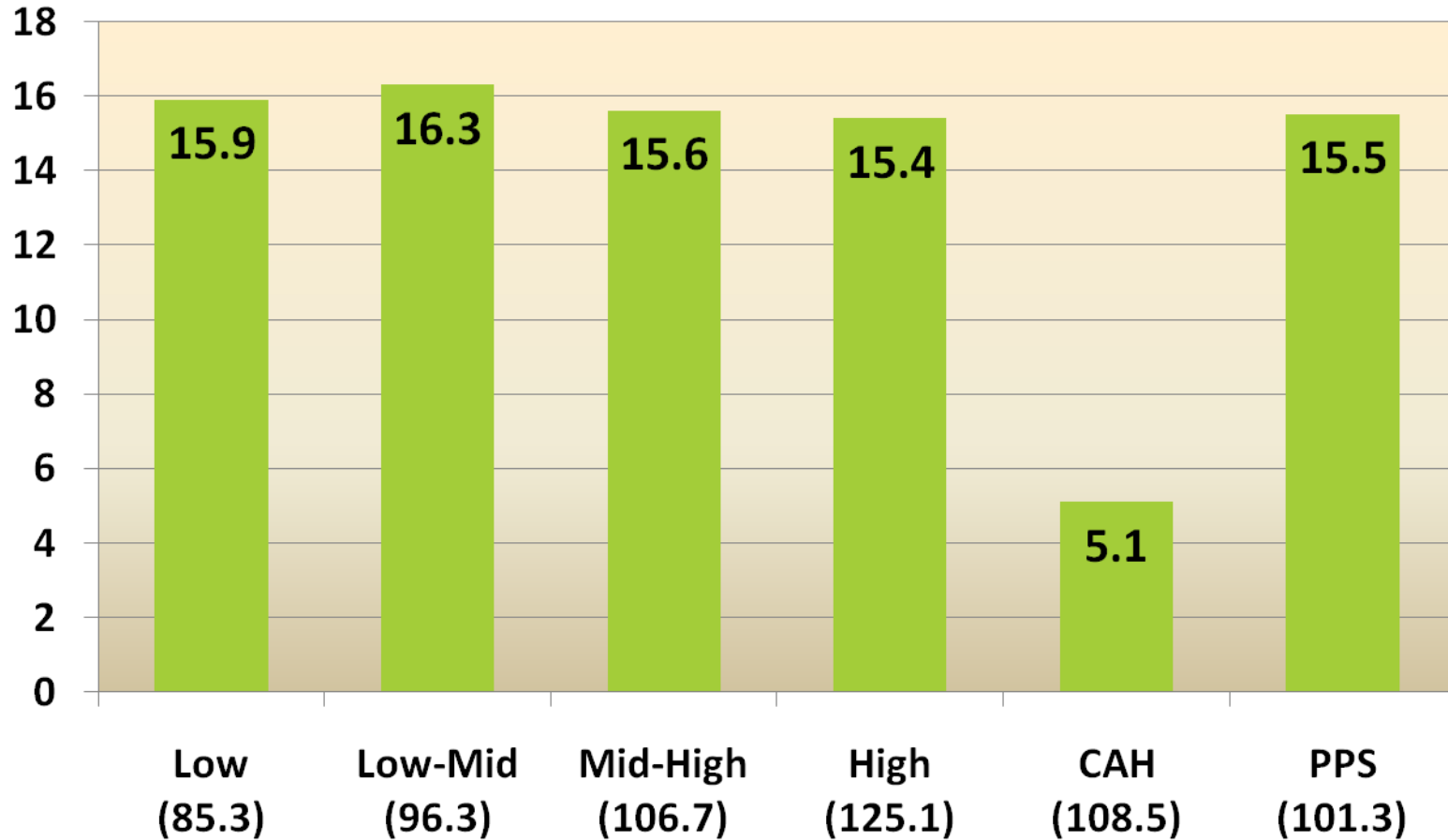
Organization Type by Hospital Cost Index® Quartiles



Teaching Status by Hospital Cost Index® Quartiles

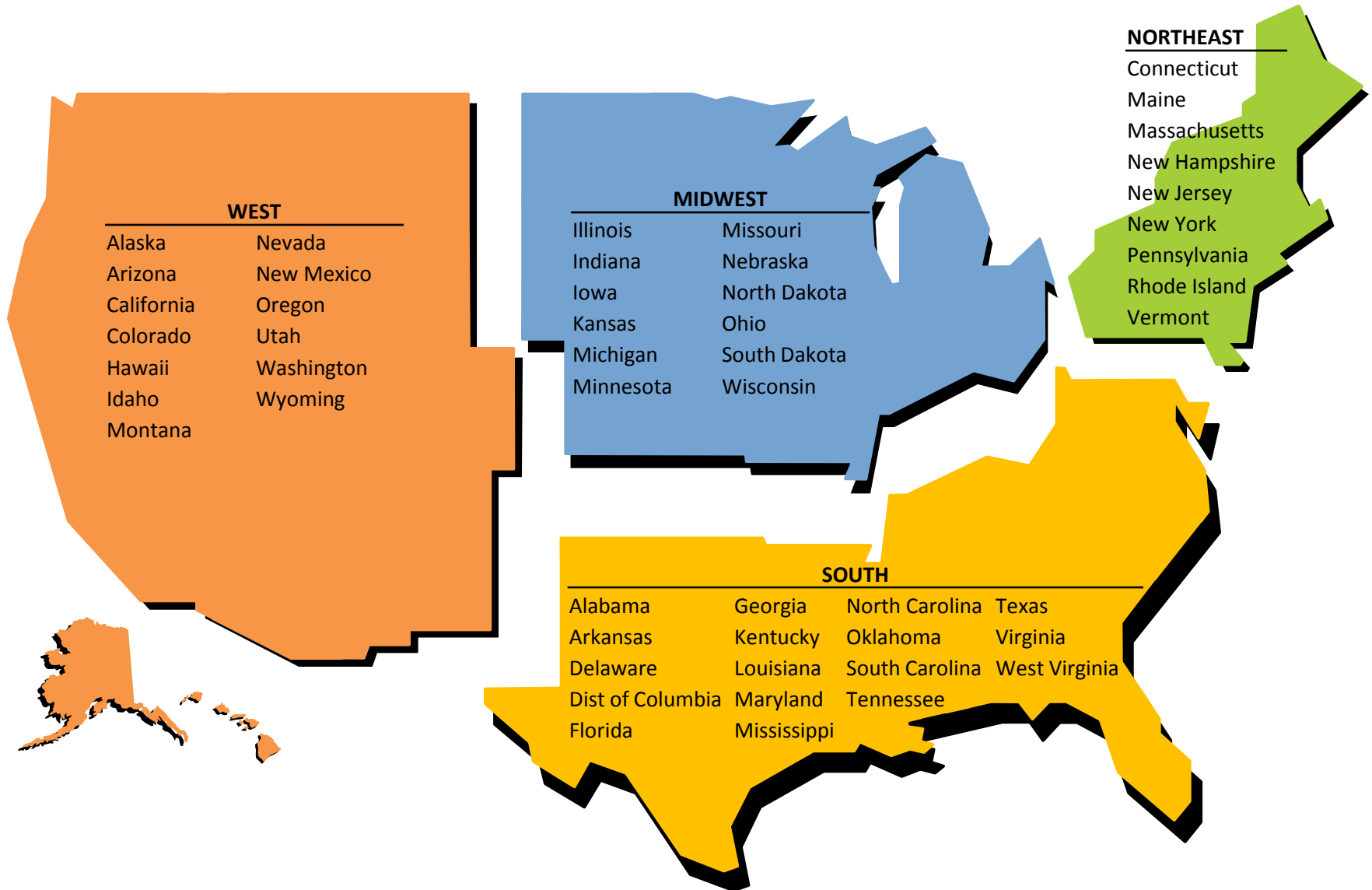


Median Medicaid Days % by Hospital Cost Index® Quartiles

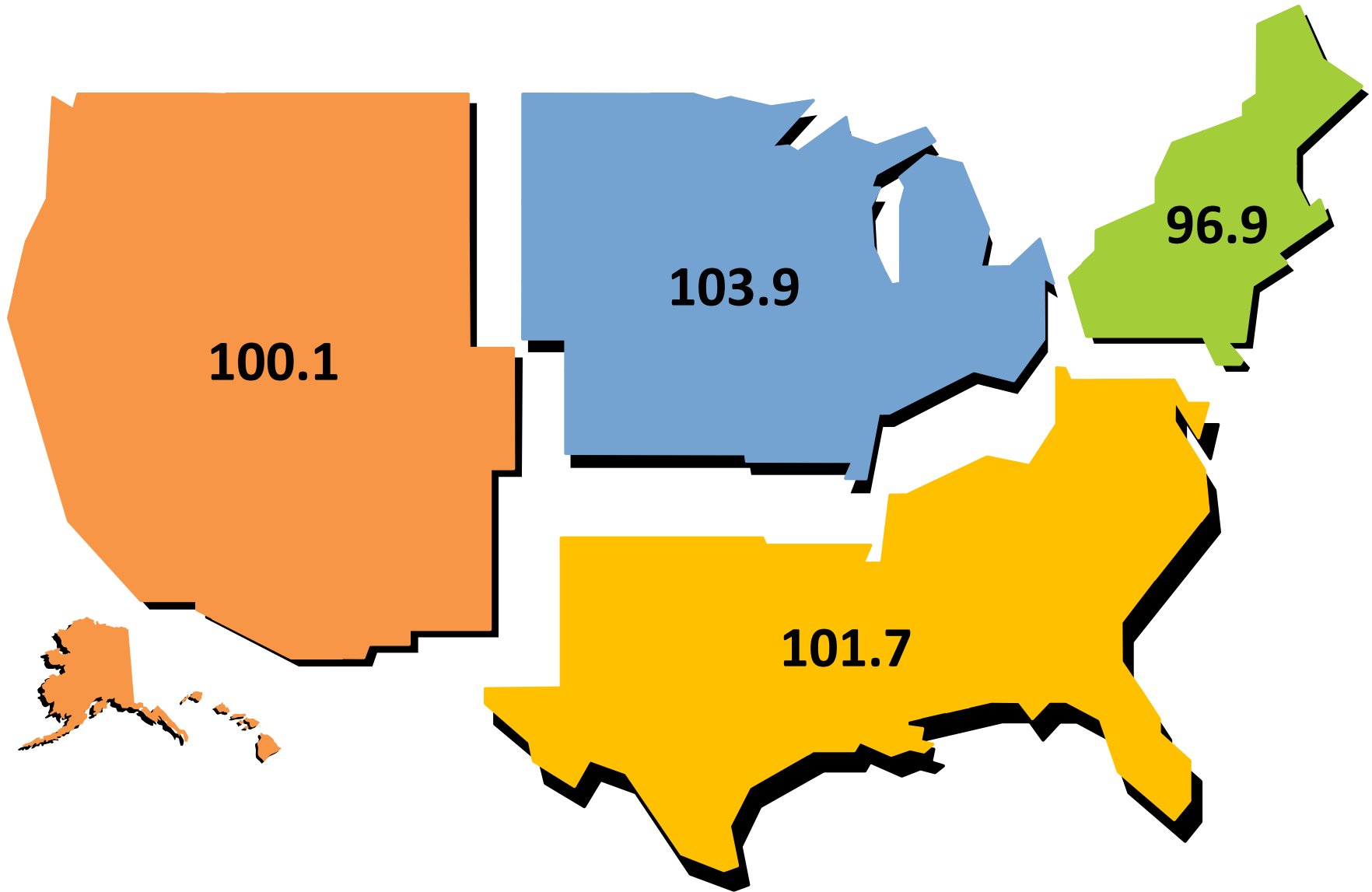


Regional differences in hospital costs

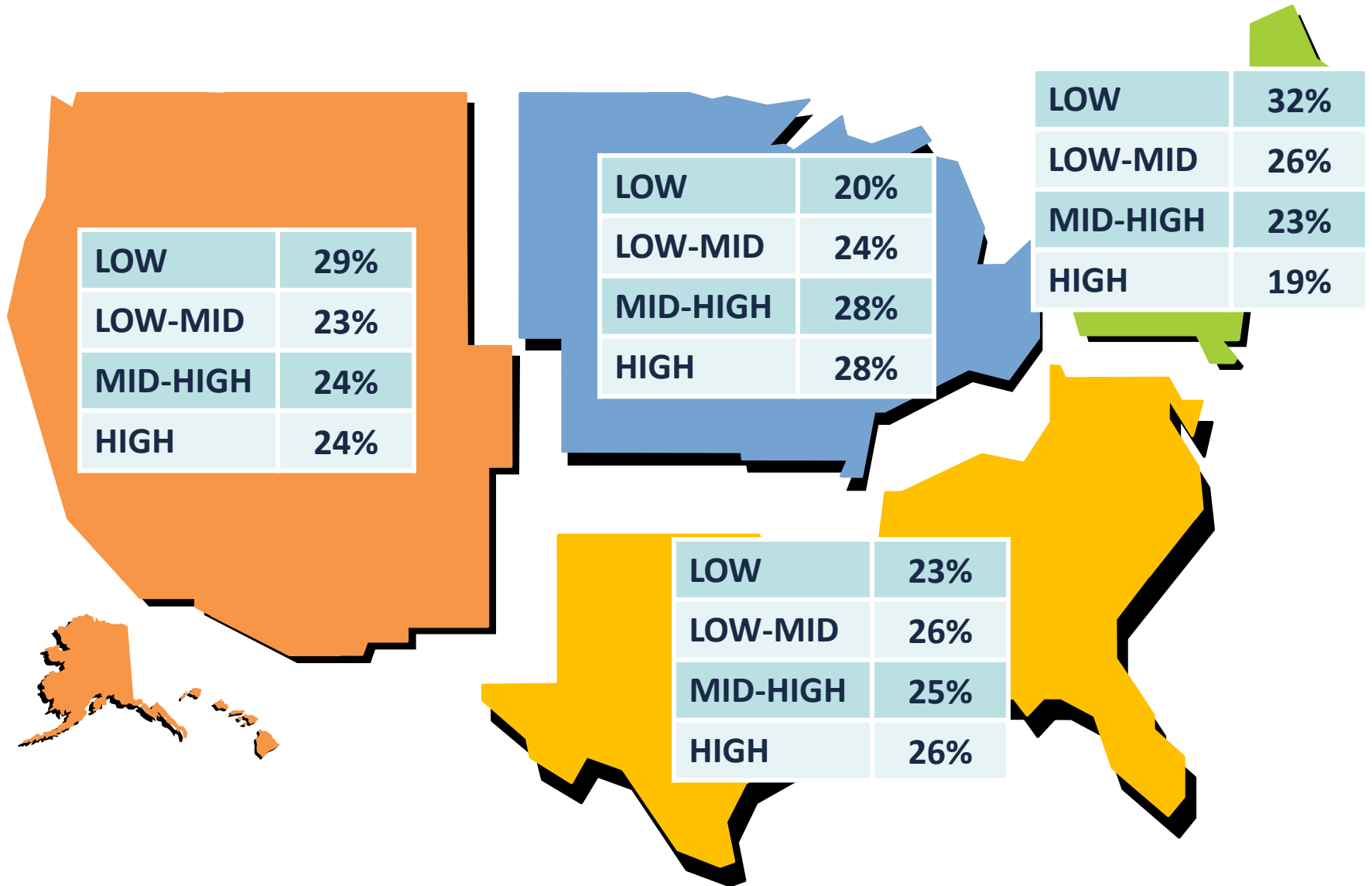
Regional Divisions Used by the United States Census Bureau



Median Hospital Cost Index[®] by Regional Divisions



Percentage of hospitals in each cost category by Regional Divisions



In what areas do low cost hospitals excel?

		Low Cost (QTR 1 HCI)	Low-Mid Cost (QTR 2 HCI)	Mid-High Cost (QTR 3 HCI)	High Cost (QTR 4 HCI)
PRICING	Hospital Charge Index®*	93.0	104.6	105.9	103.6
CHARGE CAPTURE	Injectable Drug w/o Admin %	15.1	16.6	16.1	17.6
NURSING COST	Direct Cost per Routine Day*	353	374	405	450
PRODUCTIVITY	Man-hours per Equivalent Discharge	100.3	105.6	114.1	129.3
SALARY COSTS	Salary per FTE*	55,991	57,471	57,768	58,737
ANCILLARY COSTS	Ancillary Cost per Medicare Discharge (CMI = 1.0)*	3,017	3,535	3,864	4,408
INTENSITY	Medicare LOS (CMI = 1.0)	3.2	3.3	3.3	3.4
QUALITY	Hospital Quality Index™	96.6	96.9	96.5	95.5

*wage index adjusted

In what areas do low cost hospitals excel?

		Low Cost (QTR 1 HCI)	Low-Mid Cost (QTR 2 HCI)	Mid-High Cost (QTR 3 HCI)	High Cost (QTR 4 HCI)
MARGIN	Expected Profit on DRGs %	5.6	-6.3	-14.7	-22.8
MARGIN	Expected Profit on APCs %	-1.2	-12.7	-24.9	-46.0
MARGIN	Operating Margin	2.9	2.7	1.7	1.4

Why are margins at high cost hospitals not lower?

PAYMENT	Net Patient Revenue per Equivalent Discharge*	7,004	7,885	8,505	9,406
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*wage index adjusted

What does the data reveal?

- 1) Various demographic factors are moderately associated with higher cost
- 2) In general, high cost hospitals can exist in any region, organization type or structure
- 3) Low cost hospitals excel in numerous operational areas. Length of stay and quality do not show significant differences across groups.
- 4) Low cost hospitals are more profitable in Medicare, but, have only slightly higher operating margins. Relatively speaking, high cost hospitals must be generating more revenue.

MEASURING HOSPITAL COST

Why one facility metric of comparison?

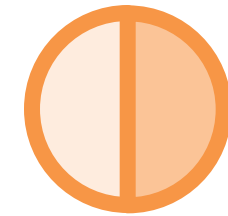
1) Evaluates complete hospital cost position



2) Permits trending over time



3) Allows for comparative benchmarking



Traditional facility-level hospital cost metrics:

- 1) Cost per adjusted patient day (*with or without CMI adjustment*)
- 2) Cost per adjusted discharge (*with or without CMI adjustment*)

Issues with traditional 'adjusted' metrics

	Total Costs (000)	Patient Days	Gross OP Rev (000)	Gross IP Rev (000)	Adj Pt Days	Cost/ Adj Pt Day
Data prior to rate increase	60,000	12,000	70,000	60,000	26,000	<u>2,308</u>
10% OP rate increase	60,000	12,000	77,000	60,000	27,400	<u>2,190</u>

Adjusted Patient Days Formula:

IP Patient Days X [1+(Gross OP Rev/Gross IP Rev)]

The ultimate goal in understanding and addressing cost issues

CREATE LOW COST PATIENT ENCOUNTERS



Inpatient Costs

Cost per Discharge



Outpatient Costs

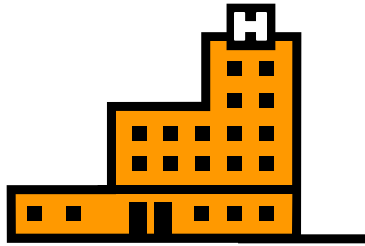
Cost per Visit

Patient Encounter Cost:

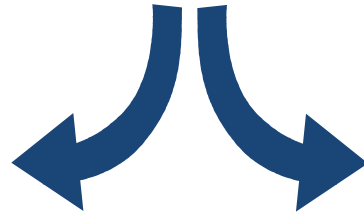
$$\text{Cost} = (Q1 \times C1) + (Q2 \times C2) + \dots + (Qn \times Cn)$$

Where Q = quantity of units and C = cost per unit

Facility-level cost comparison through one metric



Facility-level cost measure:
Hospital Cost Index[®]



Inpatient Costs

Inpatient Cost Index

Formula:

Your Medicare Cost
per Discharge (CMI/WI adj)
US Median Medicare Cost
per Discharge (CMI/WI adj)

Outpatient Costs

Outpatient Cost Index

Formula:

Your Medicare Cost
per Visit (RW/WI adj)
US Median Medicare Cost
per Visit (RW/WI adj)

What about volume?

Equivalent Discharges™

(Equivalent Patient Units™)

Inpatient Volume

Formula:

Total Gross Inpatient Charges
 Hospital Average Medicare Charge
 per Discharge (CMI adj)



OF EQUIVALENT IP DISCHARGES



OF EQUIVALENT OP DISCHARGES



EQUIVALENT DISCHARGES

Outpatient Volume

Formula:

Total Gross Outpatient Charges
 Hospital Average Medicare Charge
 per Visit (RW adj)



OF EQUIVALENT OP VISITS



IDENTIFYING AND ACTING ON COST OPPORTUNITIES

Two approaches to cost reduction



ATB

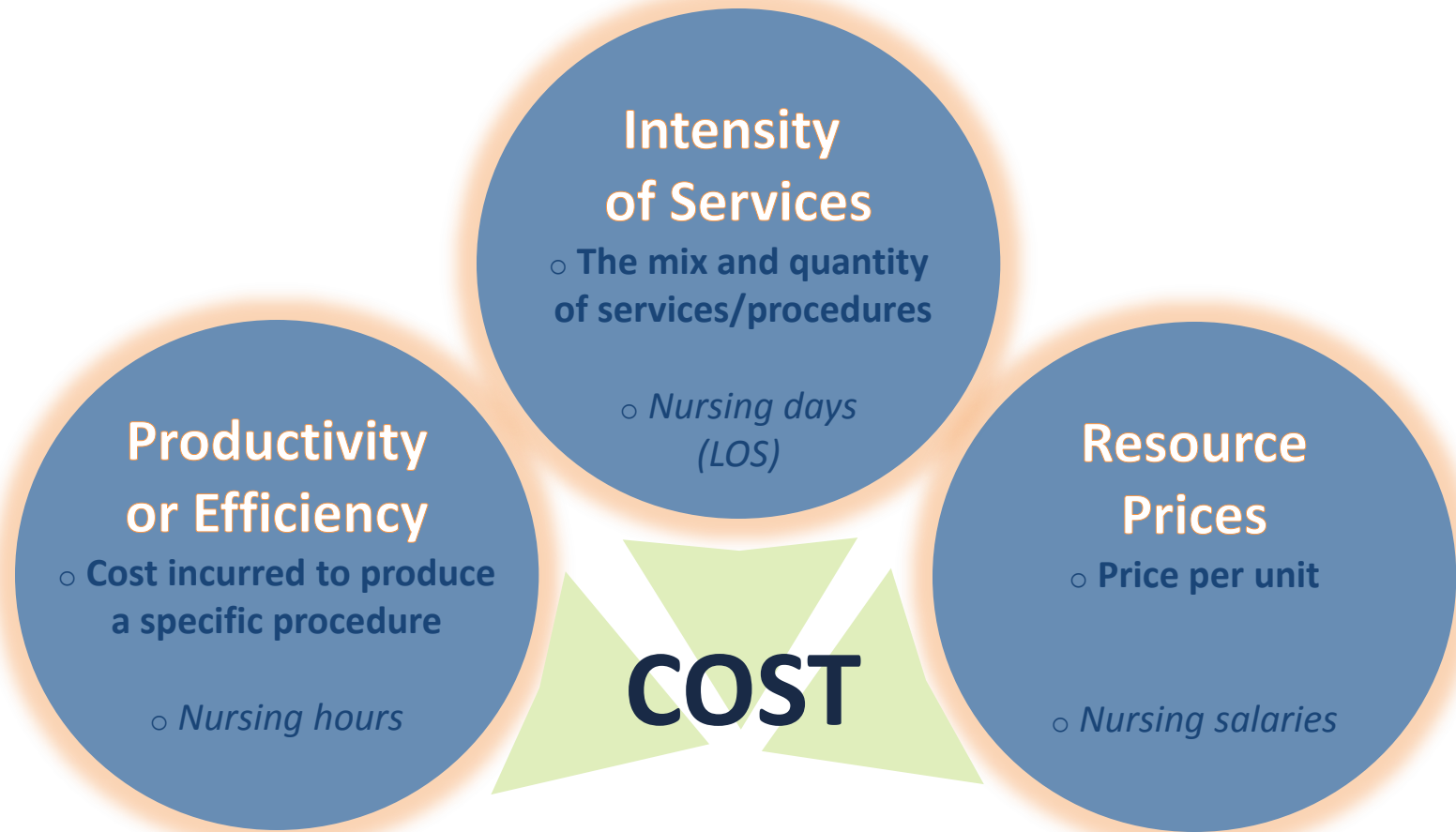
- Target set (5% reduction) and all areas must comply
- Allows whole organization to be involved
- Can jeopardize high-performing (lean) areas











Strategic

- Targeted areas identified for cost reduction
- Can cause identified areas to feel 'singled out'
- Permits cost efficiency only in areas that are most weak

Understanding the three spheres of influence on cost



Evaluating cost at multiple levels to determine action areas

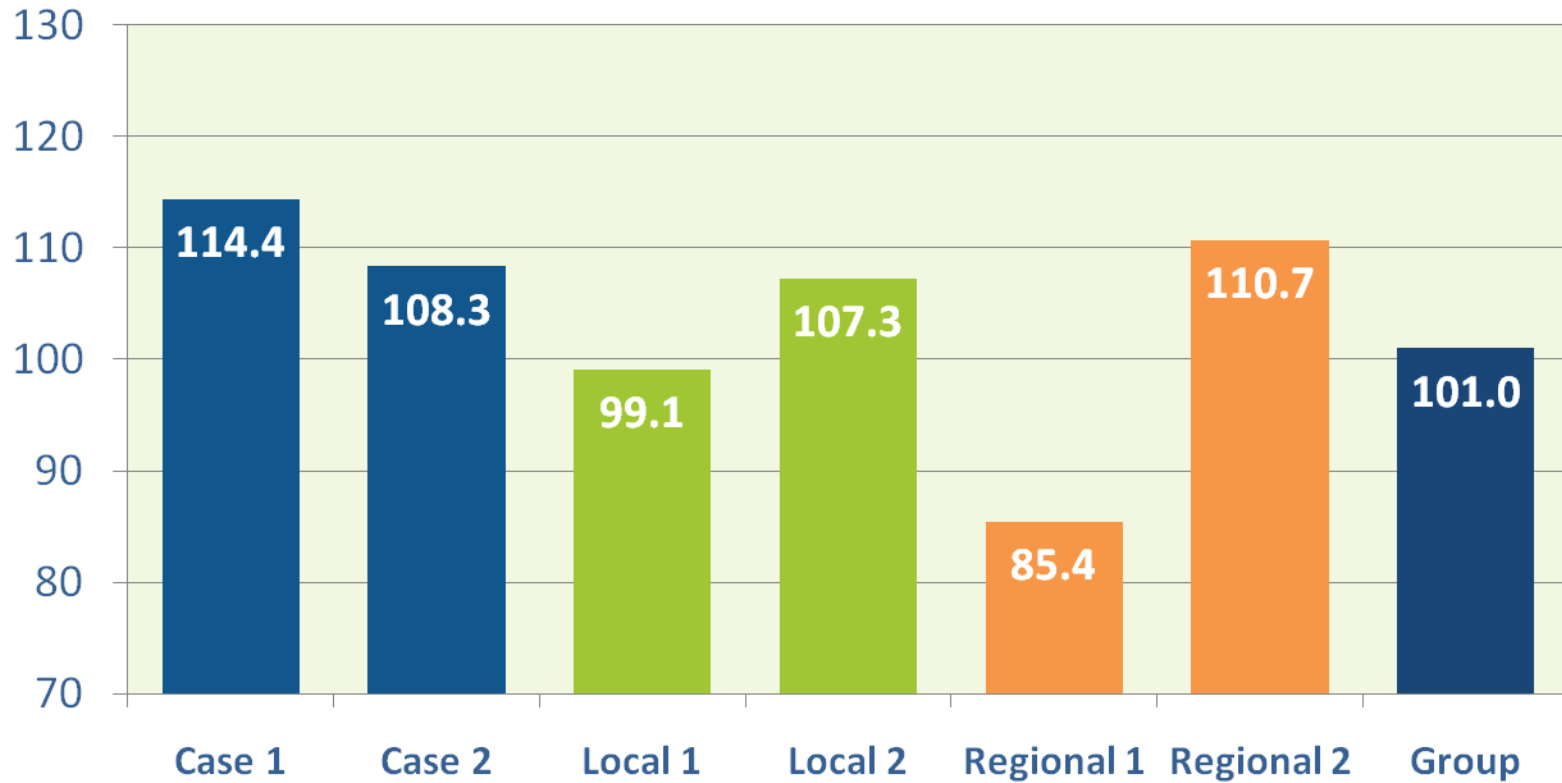
Level of Comparison	Metric	Purpose	
FACILITY	Hospital Cost Index®	Identify position and extent of cost opportunity	 <i>Survey</i>
	Medicare Cost per Discharge (CMI/WI adj)	Determine level of inpatient opportunity	 <i>Survey</i>
	Medicare Cost per Visit (RW/WI adj)	Determine level of outpatient opportunity	 <i>Survey</i>
INPATIENT CASE	Cost by MS-DRG	Are certain MS-DRGs higher cost	 <i>Focus</i>
OUTPATIENT CASE	Cost by APC	Are certain APCs higher cost	 <i>Focus</i>
DEPARTMENT	Department Relative Value Unit Comparisons	Are certain departments driving costs higher	 <i>Action</i>
LINE ITEM	Costs by item code	Are certain items higher cost	 <i>Action</i>
PHYSICIAN	Costs by physician	Are certain physicians higher cost	 <i>Action</i>

Creating strategic comparisons



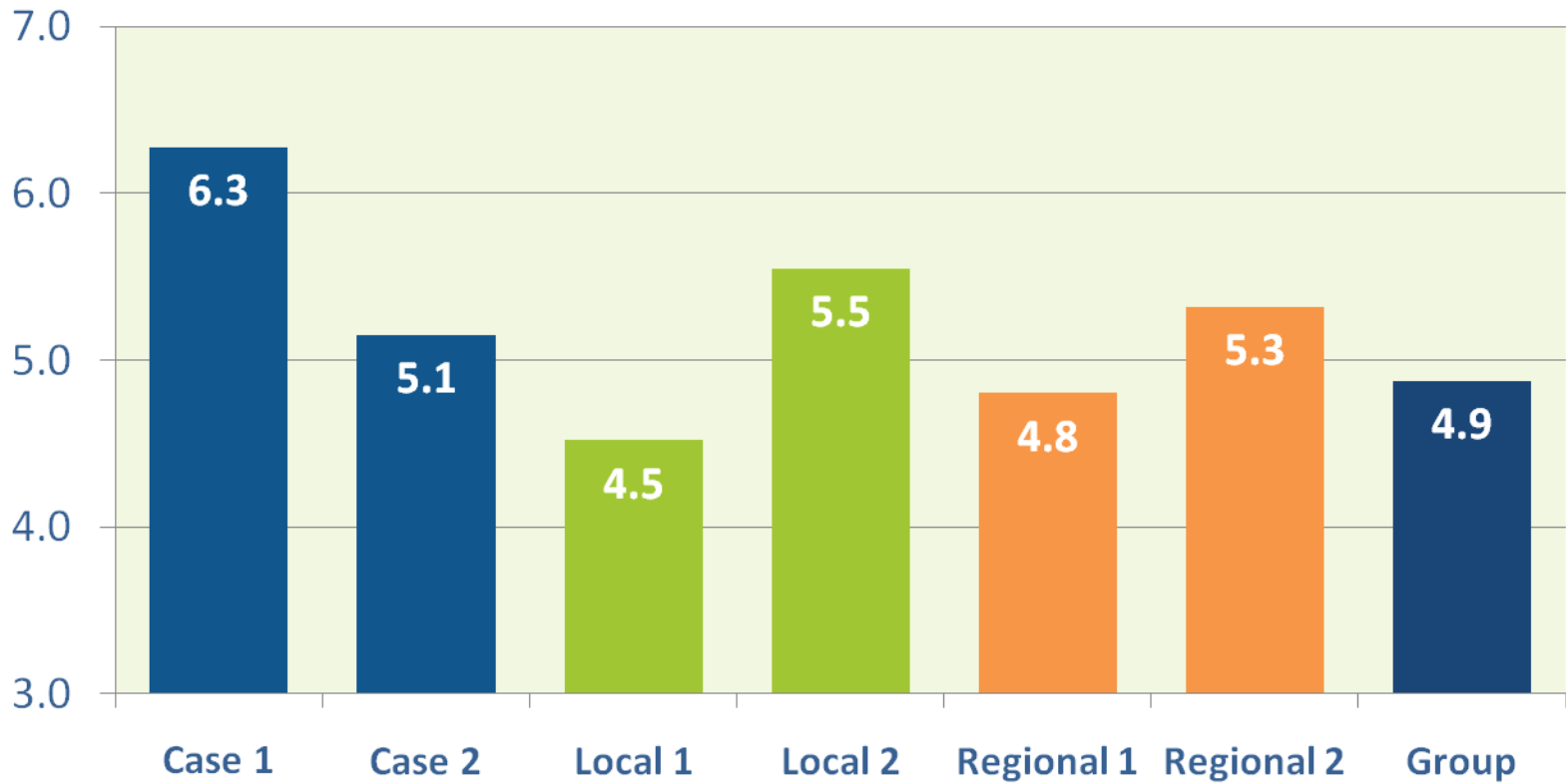
Case example 1: Intensity issue

HOSPITAL COST INDEX®



Case example 1: Intensity issue

MEDICARE LOS



Case example 1: Intensity issue

TOP INPATIENT OPPORTUNITIES – CASE 1

DRG	Definition	Case 1 Cost	Comparison Cost	Annual Savings
Top Five Medicare Opportunities at the US Average				
871	Septicemia w/o MV 96+ hours w MCC	13,755	11,394	930,385
853	Infectious & parasitic diseases w O.R. procedure w MCC	44,630	30,187	794,335
189	Pulmonary edema & respiratory failure	11,147	9,435	600,837
064	Intracranial hemorrhage or cerebral infarction w MCC	16,422	10,883	454,212
177	Respiratory infections & inflammations w MCC	16,599	12,681	352,699
Top Five Medicare Opportunities at Local 1				
871	Septicemia w/o MV 96+ hours w MCC	13,755	9,703	1,596,610
189	Pulmonary edema & respiratory failure	11,147	8,368	975,550
853	Infectious & parasitic diseases w O.R. procedure w MCC	44,630	30,960	751,814
177	Respiratory infections & inflammations w MCC	16,599	10,249	571,568
004	Trach w MV 96+ hrs or PDX exc face, mouth & neck w/o maj OR	68,140	51,099	408,981
Top Five All Payer Opportunities at the US Average				
795	Normal newborn	2,982	1,354	4,999,741
775	Vaginal delivery w/o complicating diagnoses	4,273	3,162	3,080,234
945	Rehabilitation w CC/MCC	20,854	15,956	2,771,768
871	Septicemia or severe sepsis w/o mv 96+ hours w MCC	15,214	12,694	2,079,387
765	Cesarean section w CC/MCC	9,082	7,065	1,508,694

Case example 1: Intensity issue

? How do we know costs are high?

1. This is a top opportunity MSDRG based on Medicare and All-Payer data

DRG	Definition	Case 1 Cost	Comparison Cost	Annual Savings
Top Medicare Opportunities at the US Average				
871	Septicemia w/o MV 96+ hours w MCC	13,755	11,394	930,385
Top Medicare Opportunities at Local 1				
871	Septicemia w/o MV 96+ hours w MCC	13,755	9,703	1,596,610
Top All Payer Opportunities at the US Average				
871	Septicemia or severe sepsis w/o mv 96+ hours w MCC	15,214	12,694	2,079,387

? What is the opportunity?

1. Length-of-stay variation appears to be the central cost driver

	Case 1	Case 2	Local 1	Local 2	Regional 1	Regional 2	US
Heavier ICU → ICU Days	4.55	2.10	0.96	2.61	1.60	4.49	2.38
Routine Days	3.63	4.59	4.39	4.96	4.50	2.96	4.58
Longer LOS → Total	8.18	6.69	5.35	7.57	6.10	7.45	6.96

Case example 1: Intensity issue

What is the opportunity?

2. Potential savings for septicemia treatment cost (based on all payer MSDRG 871):

- No net reduction in LOS – just reallocation of ICU to Routine
 - Reduce ICU LOS by two days
 - Increase Routine LOS by two days

	Direct Cost per Day	Change in Days	\$ Change
ICU	\$821	-1,650	-1,354,650
Routine	\$350	1,650	577,500
TOTAL SAVINGS			\$777,150

Case example 1b: Intensity issue

? How do we know costs are high?

1. This is a top opportunity MSDRG based on All-Payer data *(Medicare data excludes subprovider)*

DRG	Definition	Case 1 Cost	Comparison Cost	Annual Savings
Top All Payer Opportunities at the US Average				
945	Rehabilitation w CC/MCC	20,854	15,956	2,771,768

? What is the opportunity?

1. Length-of-stay variation appears to be the central cost driver

	Case 1	US	Difference
LOS	14.52	13.05	1.47

2. Physician variation at Case 1 is significant

Physician	MSDRG 945 Cases	Average LOS
XXX270	159	12.8
XXX271	148	15.2
XXX272	131	15.0
XXX273	128	15.5

← Significantly lower average LOS

Case example 1b: Intensity issue

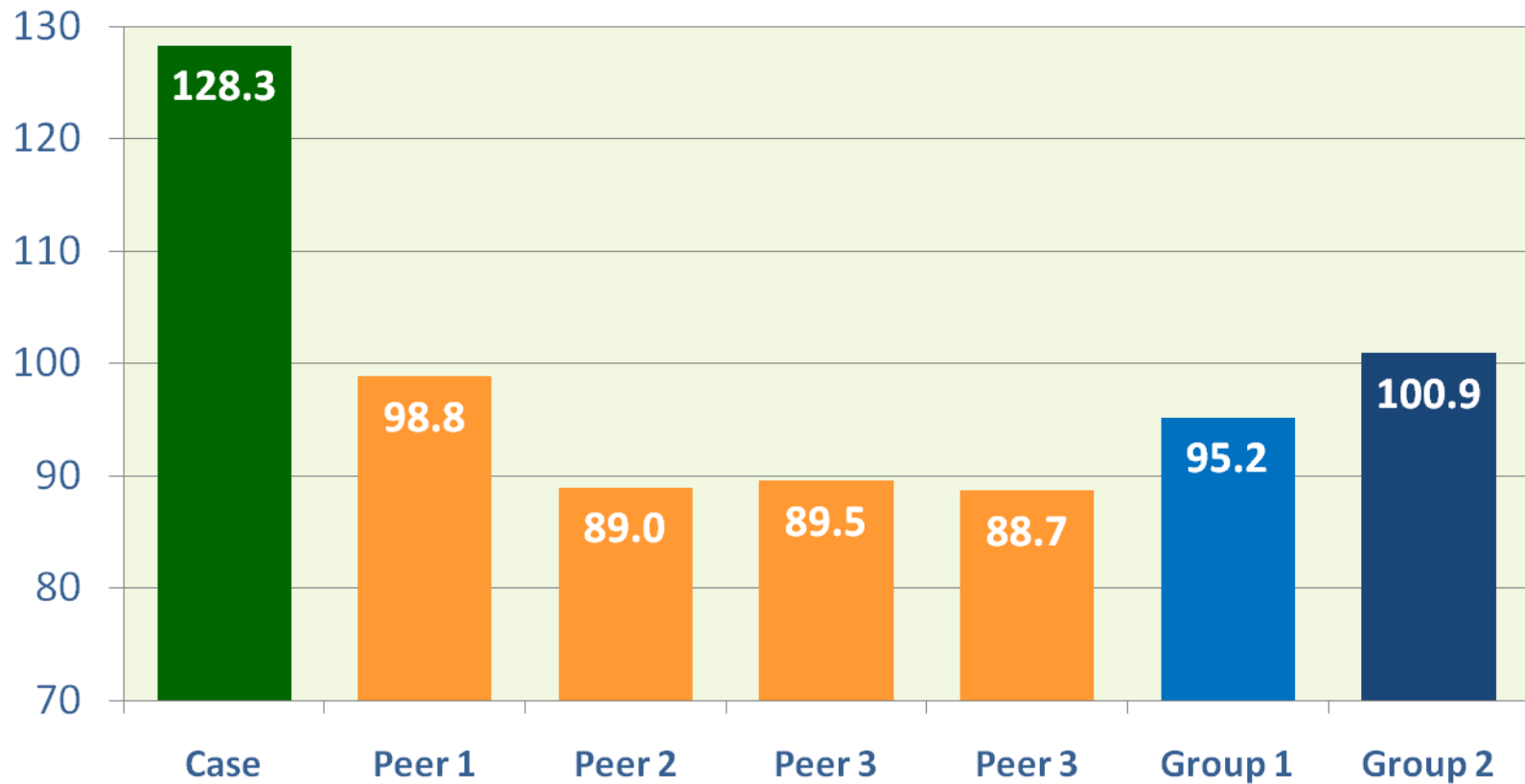
? What is the opportunity?

3. Potential savings for rehabilitation treatment cost (based on all payer MS DRG 945):

- Reduction of LOS to US average (1.47 day savings per case)
- 566 Cases X 1.47 Days X \$350 direct cost per day = \$291,207
- 566 Cases X 1.47 Days X \$750 fully allocated cost per day = \$624,015

Case example 2: Productivity issue

HOSPITAL COST INDEX®



Case example 2: Productivity issue

❓ How do labor costs/productivity compare?

1. Routine care department costs are at the Custom Group 66th percentile
2. Direct cost per patient day is higher than comparison peers and Custom Group

	Case Hospital	Competitor	Custom Group
Routine Direct Cost per Patient Day WI	413	363	343

3. Productive hours per patient day are higher than group median

	Mgmt hrs/day	Techs hrs/day	RNs hrs/day	Licensed Voc Nurses hrs/day	Aides & Orderlies hrs/day	Clerical hrs/day	Total Productive hrs/day
Case Hospital	2.04	0.46	0.68	6.56	3.68	1.97	15.40
Group Median	0.20	0.01	5.89	0.63	2.31	0.59	9.62

Case example 2: Productivity issue

? What is the opportunity?

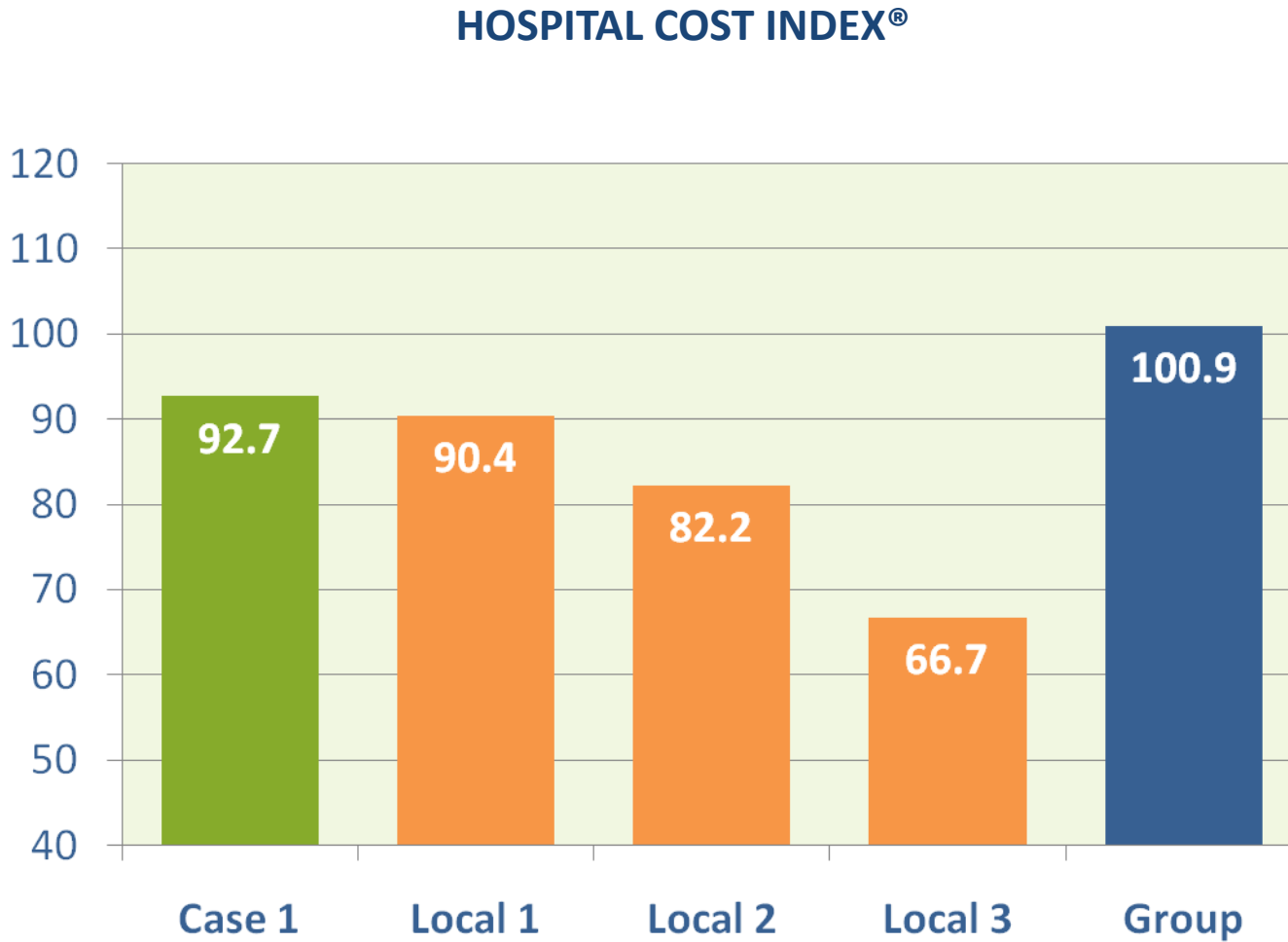
4. Potential savings for routine care treatment:

- Savings projected at Custom Group median level
- Case hospital cost per day (\$413) – Custom group median cost per day (\$343) X Case hospital routine days (21,563) = **\$1,509,410**

5. Alternative method of potential savings for routine care treatment:

- Case hospital productive hours per day (15.40) – Group median productive hours per day (9.62) X Case hospital Salary and Benefits per hour (\$29.19) X routine days (21,563) = **\$3,638,070**

Case example 3: Resource price issue



Case example 3: Resource price issue

TOP FIVE DEPARTMENTAL SAVINGS OPPORTUNITIES

Department	Direct Cost	Cost per Unit	Output Unit	Percentile within Group	Savings at Peer Group Median
Central Services and Supply	22,084,462	153.74	Adj. Pt Days	74	10,565,391
Employee Benefits	24,476,953	13,535.37	Fac FTEs	86	7,382,994
Nursing Administration	2,747,723	53.06	Dir Nursing Hrs	86	2,645,790
Operating Room	9,351,278	22.19	Wtd Procedures	69	1,915,205
Pharmacy	12,931,830	90.02	Adj Pt Days	61	1,579,007

Case example 3: Resource price issue

TOP SUPPLY SAVINGS DRGs

(Medicare Data)

MSDRG	Description	Case 1 Supply Cost	US Supply Cost	Case 1 Discharges	Total Savings
247	Perc cardiovasc proc w drug-eluting stent w/o MCC	5,783	4,612	286	334,831
227	Cardiac defibrillator implant w/o cardiac cath w/o MCC	32,342	20,246	11	133,058
246	Perc cardiovasc proc w drug-eluting stent w MCC or 4+ vessels/stents	8,716	6,257	42	103,271

Case example 3: Resource price issue

Notes on MSDRG 247 (and 246):

- Submitted “all payer” claims data also shows supply and pharmacy cost opportunity
- There is virtually zero variation in stent item code use by physicians, however, there is significant variation in the number of stents per patient (seen at right).
- Some cases exceed four stents (could be 246 categorized)
- Cost per stent is significantly higher compared to US averages. Cost per unit savings is **\$600,000** annually.

NUMBER OF STENTS – PHYSICIAN LEVEL

(All Payer Submitted Data)

Physician Code	Number of Patient Claims	Max Number of Stents	Average Number of Stents
Highest two averages:			
XXXX1	2	4	2.5
XXXX2	5	5	2.4
Volume greater than 20 claims:			
XXXX3	78	5	1.7
XXXX4	33	4	1.6
XXXX5	22	3	1.5
XXXX6	64	3	1.5
XXXX7	50	4	1.4
XXXX8	24	4	1.4
XXXX9	44	3	1.4
XXX10	59	4	1.3
Lowest two averages:			
XXX11	1	1	1.0
XXX12	1	1	1.0



Summary

- 1) In light of tightened federal reimbursement (and likely commercial, as well), hospitals must address cost to remain viable
- 2) Demographic factors do not significantly influence hospital cost – hospitals in multiple settings can be either high or low cost
- 3) Hospitals can follow “data paths” to identify and take action on cost opportunities

Thank you. Questions?

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Phone: (614) 543-7777