

FIVE QUESTIONS YOUR BUNDLED PAYMENT DATA SHOULD ANSWER

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5 LESSONS TO LEARN FROM YOUR DATA

What's your financial exposure, and for which providers (Who's in my game)?

What's your financial risk for the selected episodes, and in total?

Where are my greatest cost-saving opportunities?

How should I structure my contracts?

Are you meeting your targets?

FINANCIAL EXPOSURE

FINANCIAL EXPOSURE

	EpisodeCount	SumPmtAmt	AvgEpisodeCost
190 - Chronic obstructive pulmonary disease w MCC	35	\$837,683	\$23,934
191 - Chronic obstructive pulmonary disease w CC	24	\$552,850	\$23,035
192 - Chronic obstructive pulmonary disease w/o CC/MCC	25	\$302,752	\$12,110
202 - Bronchitis & asthma w CC/MCC	8	\$155,789	\$19,474
203 - Bronchitis & asthma w/o CC/MCC	7	\$41,788	\$5,970
231 - Coronary bypass w PTCA w MCC	3	\$210,050	\$70,017
232 - Coronary bypass w PTCA w/o MCC	1	\$52,164	\$52,164
233 - Coronary bypass w cardiac cath w MCC	5	\$432,735	\$86,547
234 - Coronary bypass w cardiac cath w/o MCC	4	\$231,459	\$57,865
235 - Coronary bypass w/o cardiac cath w MCC	8	\$642,185	\$80,273
236 - Coronary bypass w/o cardiac cath w/o MCC	14	\$565,898	\$40,421
291 - Heart failure & shock w MCC	30	\$1,137,129	\$37,904
292 - Heart failure & shock w CC	111	\$2,729,519	\$24,590
293 - Heart failure & shock w/o CC/MCC	24	\$360,842	\$15,035
466 - Revision of hip or knee replacement w MCC	2	\$100,088	\$50,044
467 - Revision of hip or knee replacement w CC	32	\$1,402,573	\$43,830
468 - Revision of hip or knee replacement w/o CC/MCC	25	\$817,656	\$32,706
469 - Major joint replacement or reattachment of lower extremity w MCC	30	\$1,617,021	\$53,901
470 - Major joint replacement or reattachment of lower extremity w/o MCC	434	\$13,337,488	\$30,732
Grand Total	822	\$25,527,670	\$31,056

AREAS OF FINANCIAL EXPOSURE

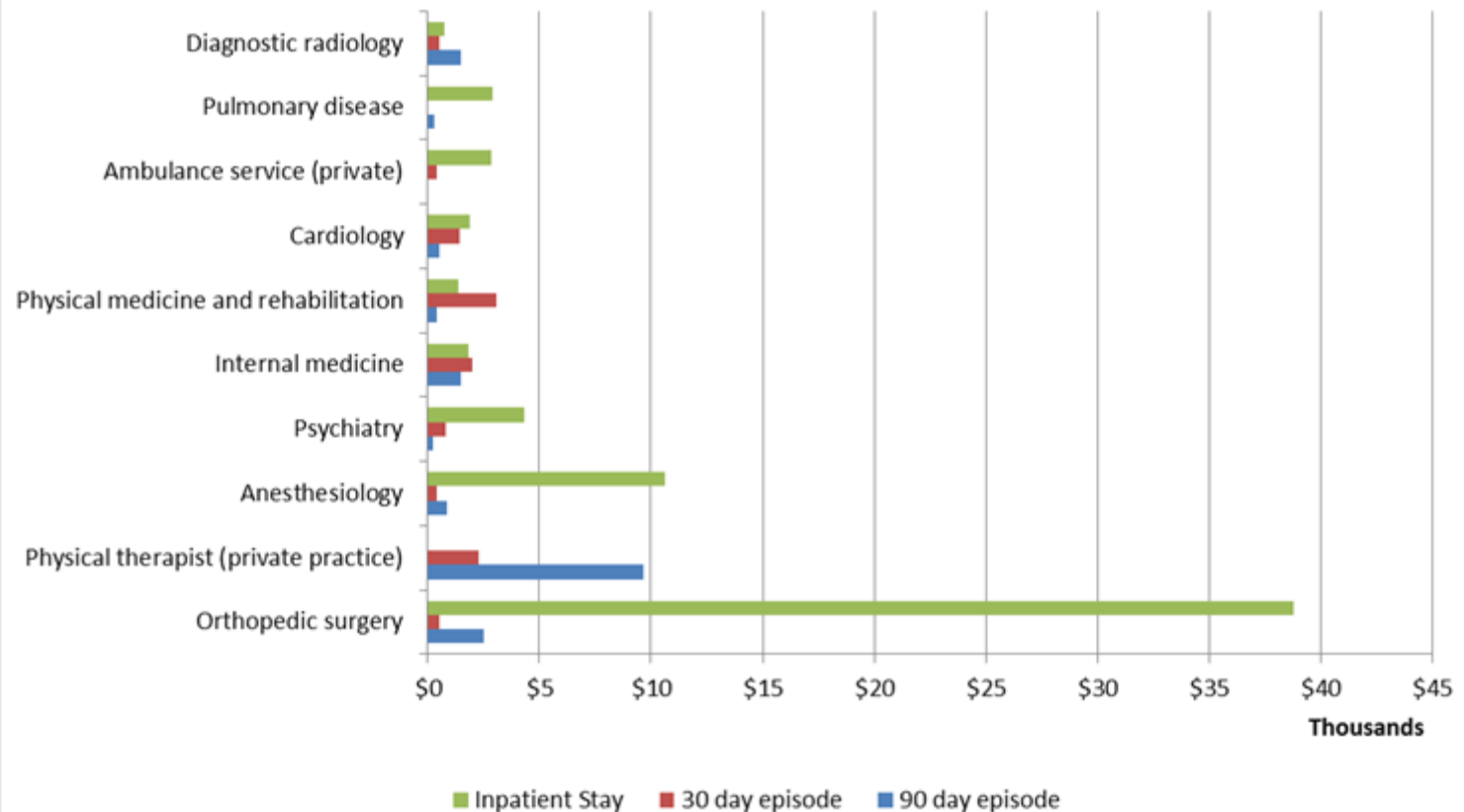
	EpisodeCount	SumPmtAmt	AvgEpisodeCost
470 - Major joint replacement or reattachment of lower extremity w/o MCC	434	\$13,337,488	\$30,732
292 - Heart failure & shock w CC	111	\$2,729,519	\$24,590
469 - Major joint replacement or reattachment of lower extremity w MCC	30	\$1,617,021	\$53,901
467 - Revision of hip or knee replacement w CC	32	\$1,402,573	\$43,830
291 - Heart failure & shock w MCC	30	\$1,137,129	\$37,904
190 - Chronic obstructive pulmonary disease w MCC	35	\$837,683	\$23,934
468 - Revision of hip or knee replacement w/o CC/MCC	25	\$817,656	\$32,706
235 - Coronary bypass w/o cardiac cath w MCC	8	\$642,185	\$80,273
236 - Coronary bypass w/o cardiac cath w/o MCC	14	\$565,898	\$40,421
191 - Chronic obstructive pulmonary disease w CC	24	\$552,850	\$23,035
233 - Coronary bypass w cardiac cath w MCC	5	\$432,735	\$86,547
293 - Heart failure & shock w/o CC/MCC	24	\$360,842	\$15,035
192 - Chronic obstructive pulmonary disease w/o CC/MCC	25	\$302,752	\$12,110
234 - Coronary bypass w cardiac cath w/o MCC	4	\$231,459	\$57,865
231 - Coronary bypass w PTCA w MCC	3	\$210,050	\$70,017
202 - Bronchitis & asthma w CC/MCC	8	\$155,789	\$19,474
466 - Revision of hip or knee replacement w MCC	2	\$100,088	\$50,044
232 - Coronary bypass w PTCA w/o MCC	1	\$52,164	\$52,164
203 - Bronchitis & asthma w/o CC/MCC	7	\$41,788	\$5,970
Grand Total	822	\$25,527,670	\$31,056

COSTS PER EPISODE

	EpisodeCount	SumPmtAmt	AvgEpisodeCost
470 - Major joint replacement or reattachment of lower extremity w/o MCC	465	\$14,534,090	\$31,256
292 - Heart failure & shock w CC	114	\$2,861,986	\$25,105
469 - Major joint replacement or reattachment of lower extremity w MCC	36	\$1,950,928	\$54,192
467 - Revision of hip or knee replacement w CC	39	\$1,714,190	\$43,954
291 - Heart failure & shock w MCC	48	\$1,684,090	\$35,085
190 - Chronic obstructive pulmonary disease w MCC	37	\$1,143,435	\$30,904
468 - Revision of hip or knee replacement w/o CC/MCC	27	\$838,448	\$31,054
235 - Coronary bypass w/o cardiac cath w MCC	10	\$779,680	\$77,968
191 - Chronic obstructive pulmonary disease w CC	26	\$617,291	\$23,742
293 - Heart failure & shock w/o CC/MCC	30	\$543,596	\$18,120
236 - Coronary bypass w/o cardiac cath w/o MCC	13	\$527,191	\$40,553
233 - Coronary bypass w cardiac cath w MCC	6	\$456,486	\$76,081
202 - Bronchitis & asthma w CC/MCC	13	\$349,304	\$26,870
466 - Revision of hip or knee replacement w MCC	4	\$267,195	\$66,799
192 - Chronic obstructive pulmonary disease w/o CC/MCC	20	\$253,530	\$12,677
231 - Coronary bypass w PTCA w MCC	3	\$210,050	\$70,017
234 - Coronary bypass w cardiac cath w/o MCC	3	\$200,217	\$66,739
232 - Coronary bypass w PTCA w/o MCC	1	\$52,306	\$52,306
203 - Bronchitis & asthma w/o CC/MCC	6	\$35,046	\$5,841
Grand Total	901	\$29,019,059	\$32,208

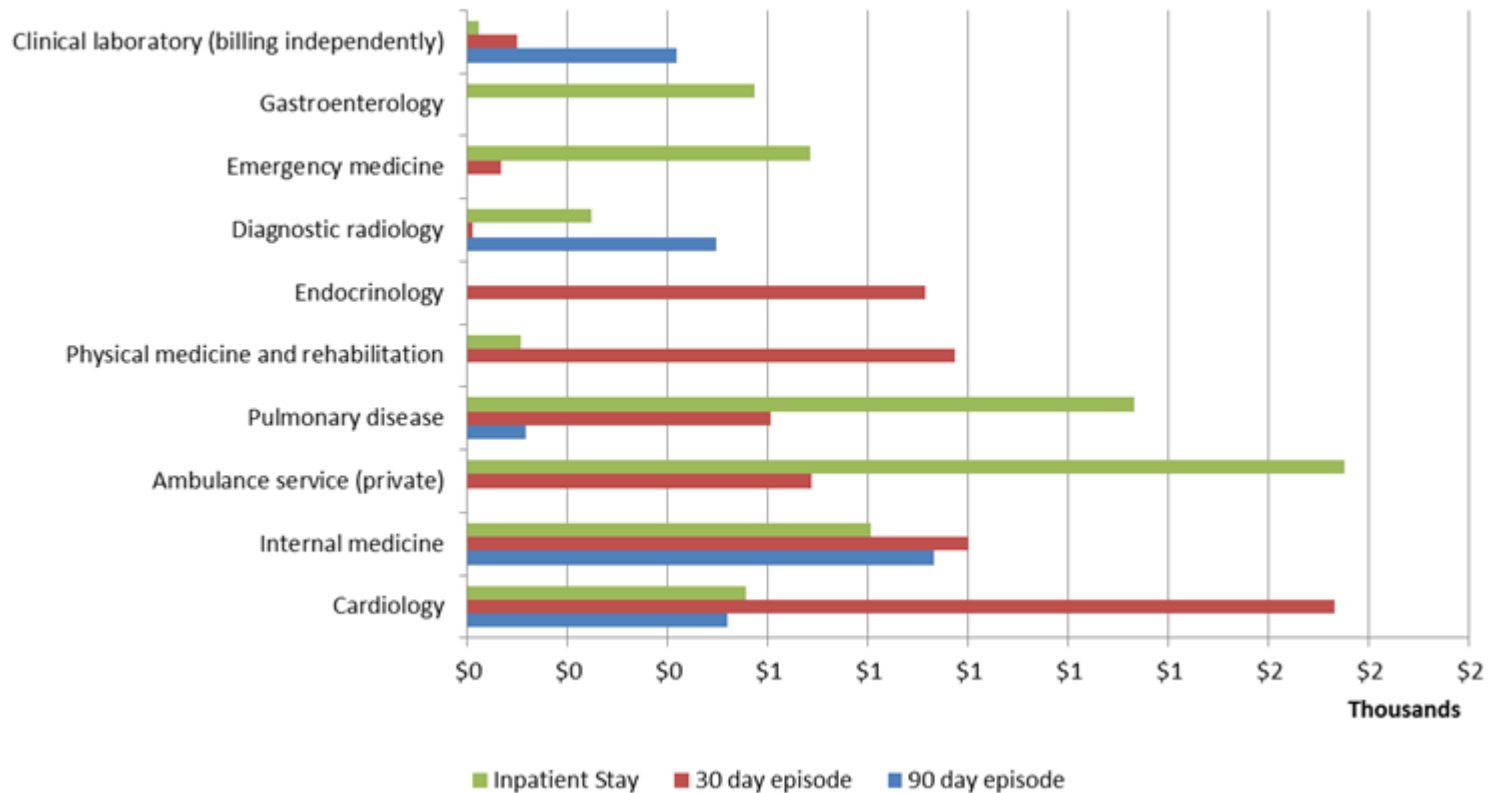
TOP 10 PHYSICIAN SPECIALTIES

Cost by Physician Specialty - Major Joint Replacement



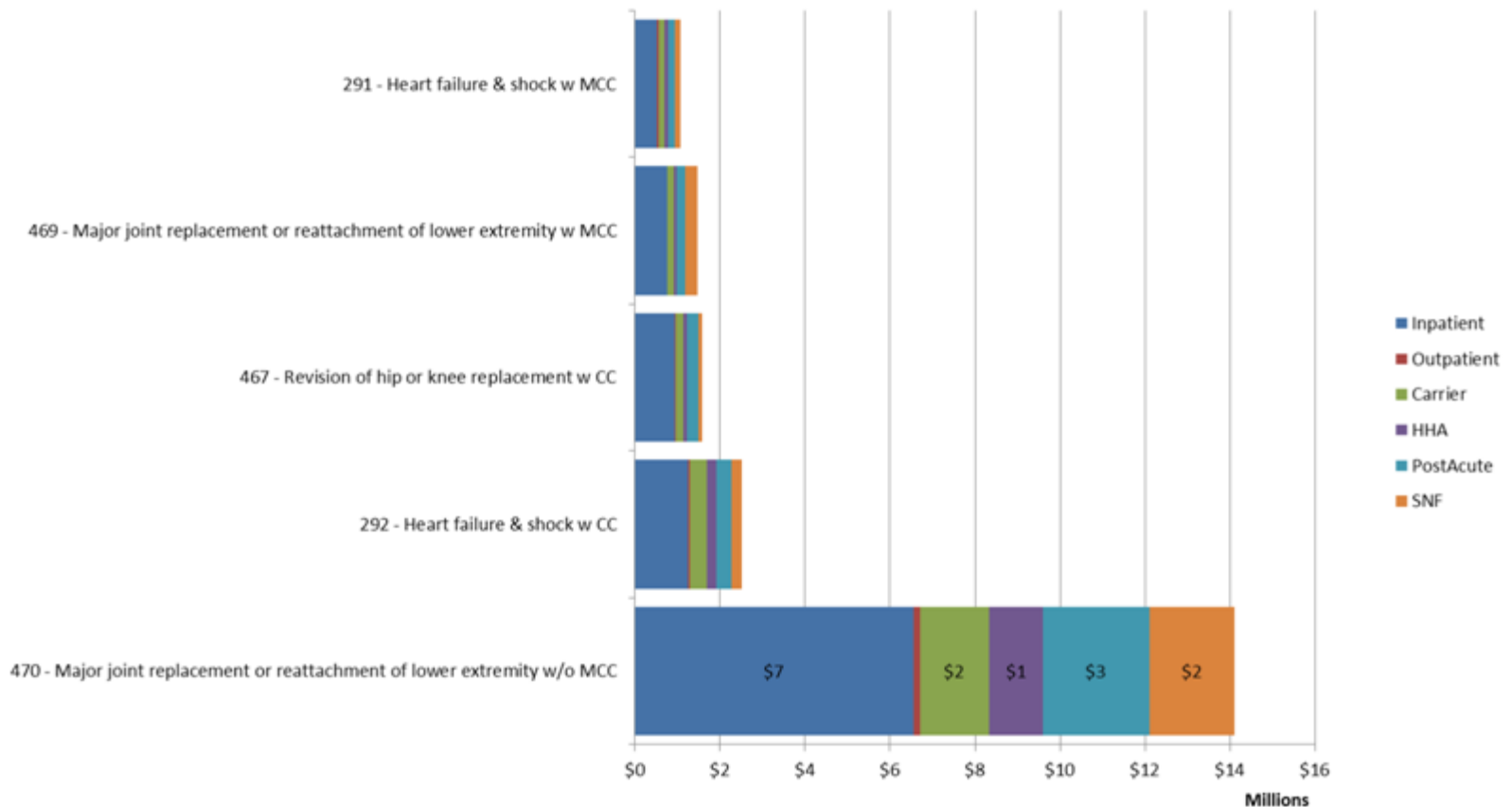
TOP 10 PHYSICIAN SPECIALTIES

Cost by Physician Specialty - COPD



FINANCIAL EXPOSURE BY PROVIDER TYPE

Payments by Provider Type - Top 5 DRGs



REGIONAL VARIATION

AMI

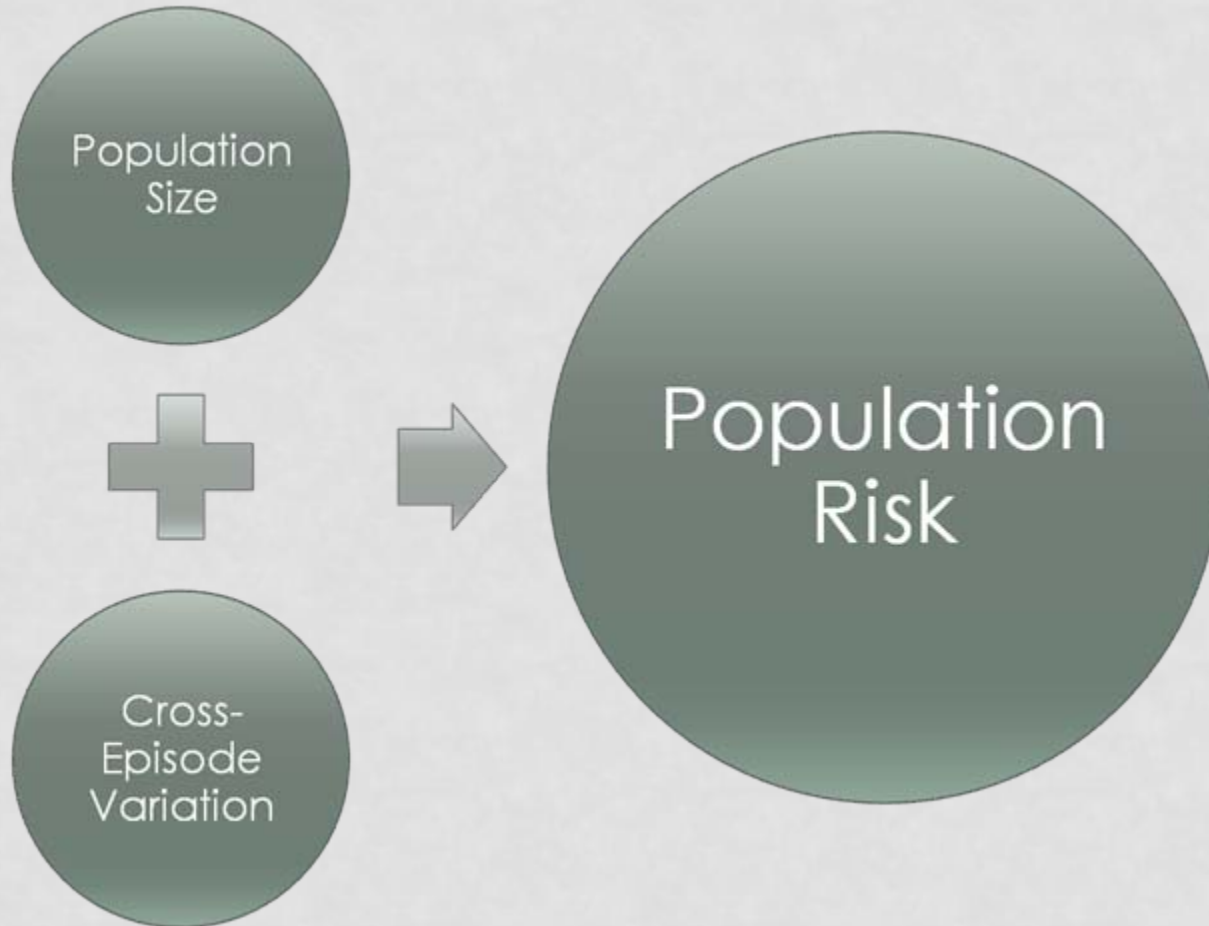
	Manhattan	Newark-White Plains
Readmission	38%	45%
HHA	31%	17%
SNF	28%	35%
Inpatient Rehab	2%	1%

Major Joint – Lower Extremity

	Manhattan	Newark-White Plains
Readmission	14%	11%
HHA	14%	50%
SNF	41%	1%
Inpatient Rehab	32%	23%

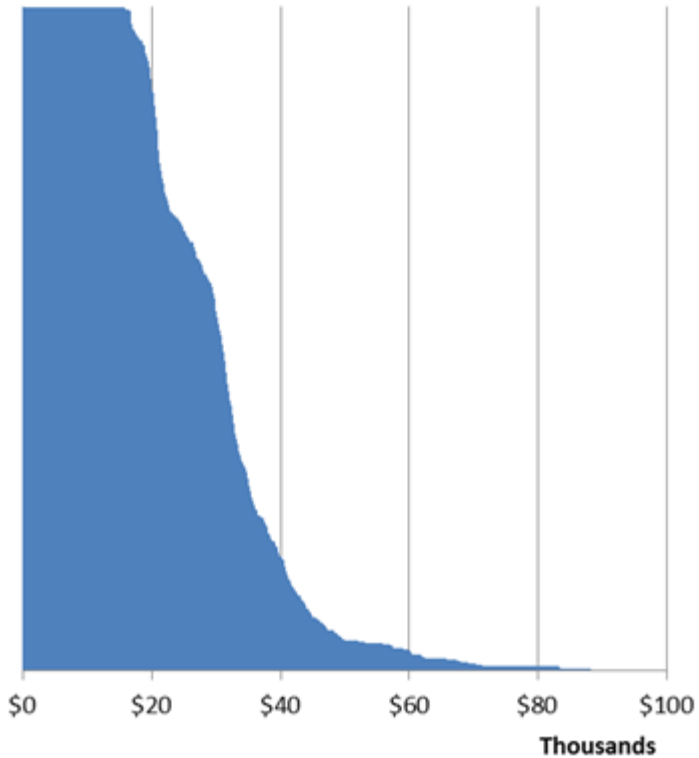
FINANCIAL RISK

POPULATION RISK FACTORS



POPULATION RISK

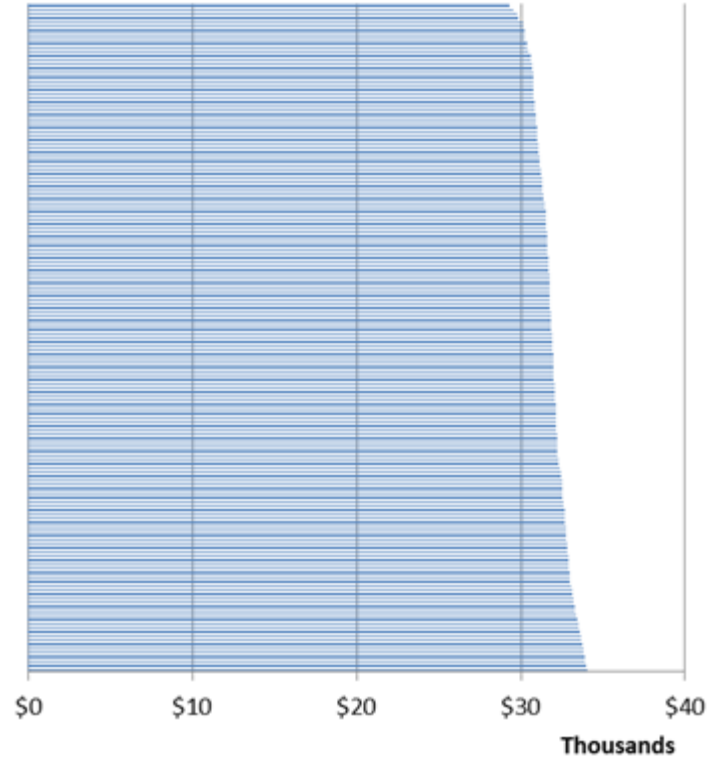
**Cost per Individual Episode -
DRG 470**



Not normally distributed



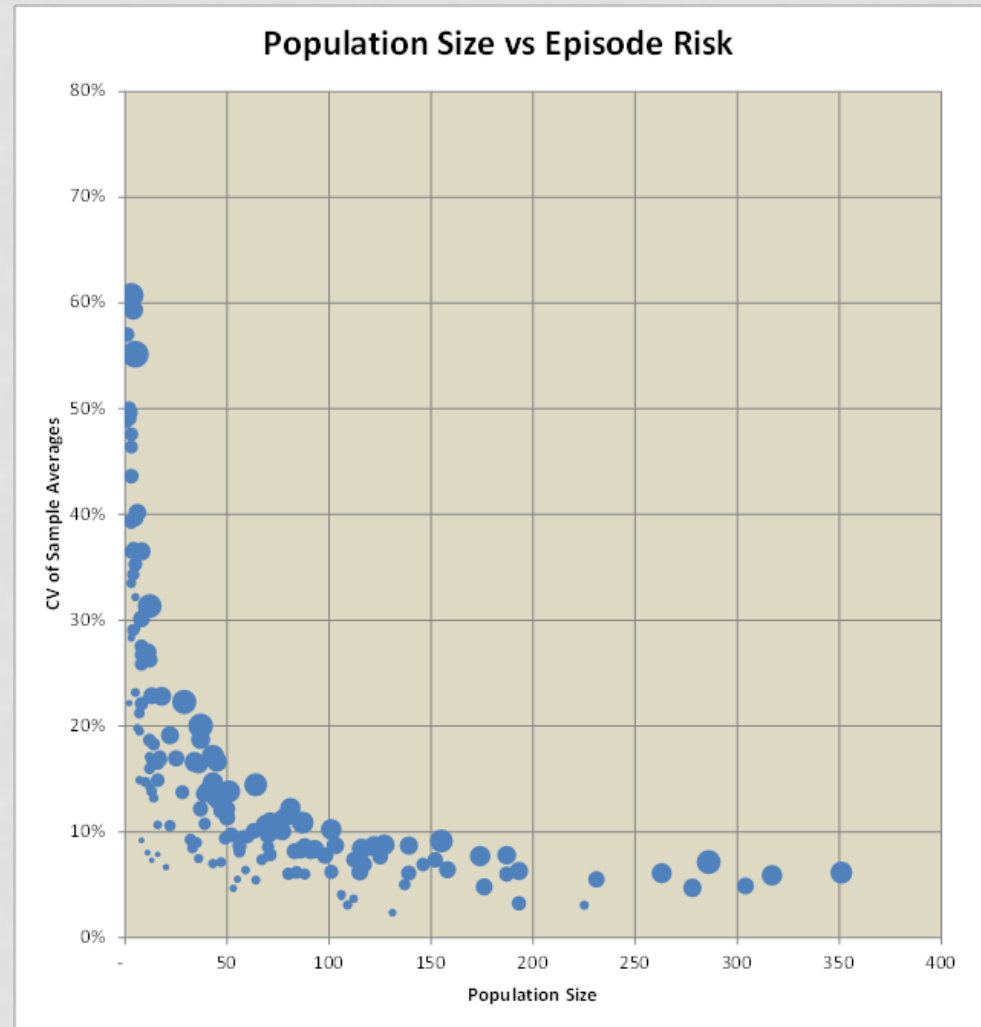
**Average Episode Cost for
Population of 200 Episodes**



Normally distributed

POPULATION RISK FACTORS

- Population size vs. coefficient of variation of sample averages
- Bubble size is CV of episode cost



EPISODE RISK ANALYSIS

	EpisodeCount	Episode Avg Pmt	EpisodeCV	Group CV	MaxLoss	Group CV Status
CABG						
236 - Coronary bypass w/o cardiac cath w/o MCC	14	\$43,501	24 %	5 %	\$55,546	●
235 - Coronary bypass w/o cardiac cath w MCC	12	\$73,989	37 %	7 %	\$124,013	●
233 - Coronary bypass w cardiac cath w MCC	7	\$82,615	21 %	8 %	\$96,521	●
234 - Coronary bypass w cardiac cath w/o MCC	5	\$57,739	29 %	5 %	\$27,707	●
Cardiac valve						
216 - Cardiac valve & oth maj cardiothoracic proc w card cath w MCC	67	\$89,783	24 %	2 %	\$285,763	●
219 - Cardiac valve & oth maj cardiothoracic proc w/o card cath w MCC	63	\$84,881	38 %	3 %	\$311,605	●
217 - Cardiac valve & oth maj cardiothoracic proc w card cath w CC	33	\$63,374	26 %	2 %	\$95,782	●
220 - Cardiac valve & oth maj cardiothoracic proc w/o card cath w CC	26	\$59,633	36 %	2 %	\$71,819	●
221 - Cardiac valve & oth maj cardiothoracic proc w/o card cath w/o CC/MCC	4	\$35,823	7 %	9 %	\$26,614	●
218 - Cardiac valve & oth maj cardiothoracic proc w card cath w/o CC/MCC	2	\$61,431	3 %	14 %	\$33,798	●
Major joint replacement of the lower extremity						
470 - Major joint replacement or reattachment of lower extremity w/o MCC	585	\$33,743	37 %	3 %	\$1,138,751	●
469 - Major joint replacement or reattachment of lower extremity w MCC	42	\$54,608	42 %	12 %	\$539,557	●
Simple pneumonia and respiratory infections						
194 - Simple pneumonia & pleurisy w CC	94	\$19,689	79 %	5 %	\$176,976	●
193 - Simple pneumonia & pleurisy w MCC	53	\$33,712	72 %	7 %	\$255,227	●
178 - Respiratory infections & inflammations w CC	49	\$28,474	65 %	9 %	\$264,521	●
177 - Respiratory infections & inflammations w MCC	40	\$34,585	61 %	9 %	\$254,736	●
195 - Simple pneumonia & pleurisy w/o CC/MCC	30	\$11,410	68 %	11 %	\$74,727	●
179 - Respiratory infections & inflammations w/o CC/MCC	9	\$17,880	57 %	27 %	\$88,396	●

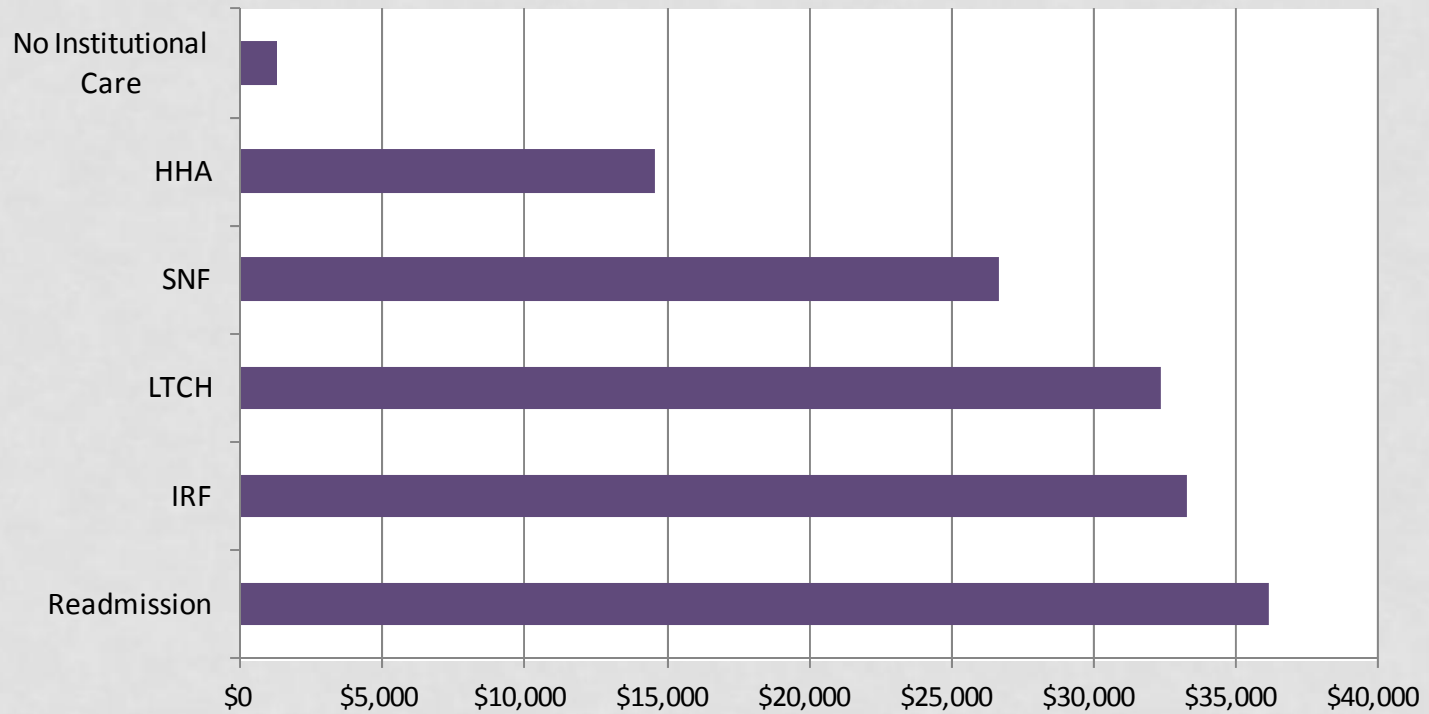
CALCULATING MAXIMUM EXPECTED LOSS

DRG	470
Average Population Episode Cost	\$ 31,904
Std Dev of Episode Cost	\$ 985
Coefficient of Variation	3%
2 SD Low Avg Pmt	\$ 29,933
2 SD High Avg Pmt	\$ 33,874
Our case count	225
Total Revenue	\$ 7,178,154
Max loss (97.5%)	\$ 443,369

OPPORTUNITY

FIRST POST-ANCHOR SITE OF CARE

Post-Anchor Payment



WHERE ARE MY GREATEST COST-SAVING OPPORTUNITIES?

Row Labels	EpisodeReadmitRate
190 - Chronic obstructive pulmonary disease w MCC	38 %
191 - Chronic obstructive pulmonary disease w CC	29 %
192 - Chronic obstructive pulmonary disease w/o CC/MCC	25 %
202 - Bronchitis & asthma w CC/MCC	25 %
231 - Coronary bypass w PTCA w MCC	33 %
232 - Coronary bypass w PTCA w/o MCC	100 %
233 - Coronary bypass w cardiac cath w MCC	25 %
234 - Coronary bypass w cardiac cath w/o MCC	67 %
235 - Coronary bypass w/o cardiac cath w MCC	44 %
236 - Coronary bypass w/o cardiac cath w/o MCC	8 %
291 - Heart failure & shock w MCC	44 %
292 - Heart failure & shock w CC	36 %
293 - Heart failure & shock w/o CC/MCC	37 %
466 - Revision of hip or knee replacement w MCC	50 %
467 - Revision of hip or knee replacement w CC	33 %
468 - Revision of hip or knee replacement w/o CC/MCC	17 %
469 - Major joint replacement or reattachment of lower extremity w MCC	21 %
470 - Major joint replacement or reattachment of lower extremity w/o MCC	12 %
Grand Total	22 %

TOP READMIT DRGS FOR TOP INDEX DRGS

Row Labels	ReadmitCount
291 - Heart failure & shock w MCC	10
292 - Heart failure & shock w CC	3
291 - Heart failure & shock w MCC	3
871 - Septicemia or severe sepsis w/o MV 96+ hours w MCC	2
280 - Acute myocardial infarction, discharged alive w MCC	2
470 - Major joint replacement or reattachment of lower extremity w/o MCC	23
560 - Aftercare, musculoskeletal system & connective tissue w CC	3
392 - Esophagitis, gastroent & misc digest disorders w/o MCC	3
812 - Red blood cell disorders w/o MCC	3
470 - Major joint replacement or reattachment of lower extremity w/o MCC	2
291 - Heart failure & shock w MCC	2
176 - Pulmonary embolism w/o MCC	2
863 - Postoperative & post-traumatic infections w/o MCC	2
310 - Cardiac arrhythmia & conduction disorders w/o CC/MCC	2
057 - Degenerative nervous system disorders w/o MCC	2
312 - Syncope & collapse	2
Grand Total	33

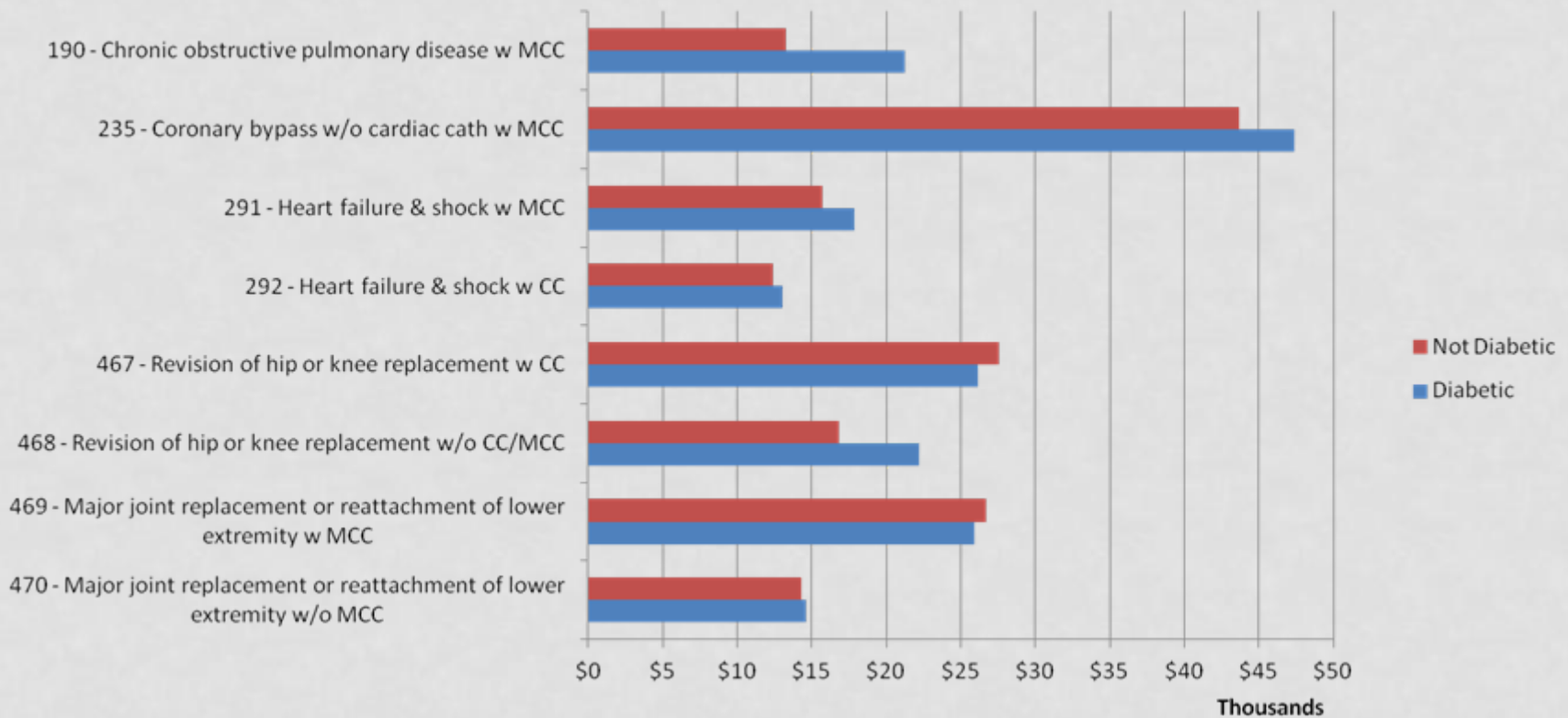
READMISSIONS DRIVE COSTS

	Without readmits		Episodes with a readmission	
	# Episodes	Total Episode Price	# Episodes	Total Episode Price
MAJOR JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREMITY W/O MCC	1,531	\$32,817	530	\$41,943

	Without readmits		Episodes with a readmission	
	# Episodes	Total Episode Price	# Episodes	Total Episode Price
ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W MCC	289	\$24,637	305	\$50,569

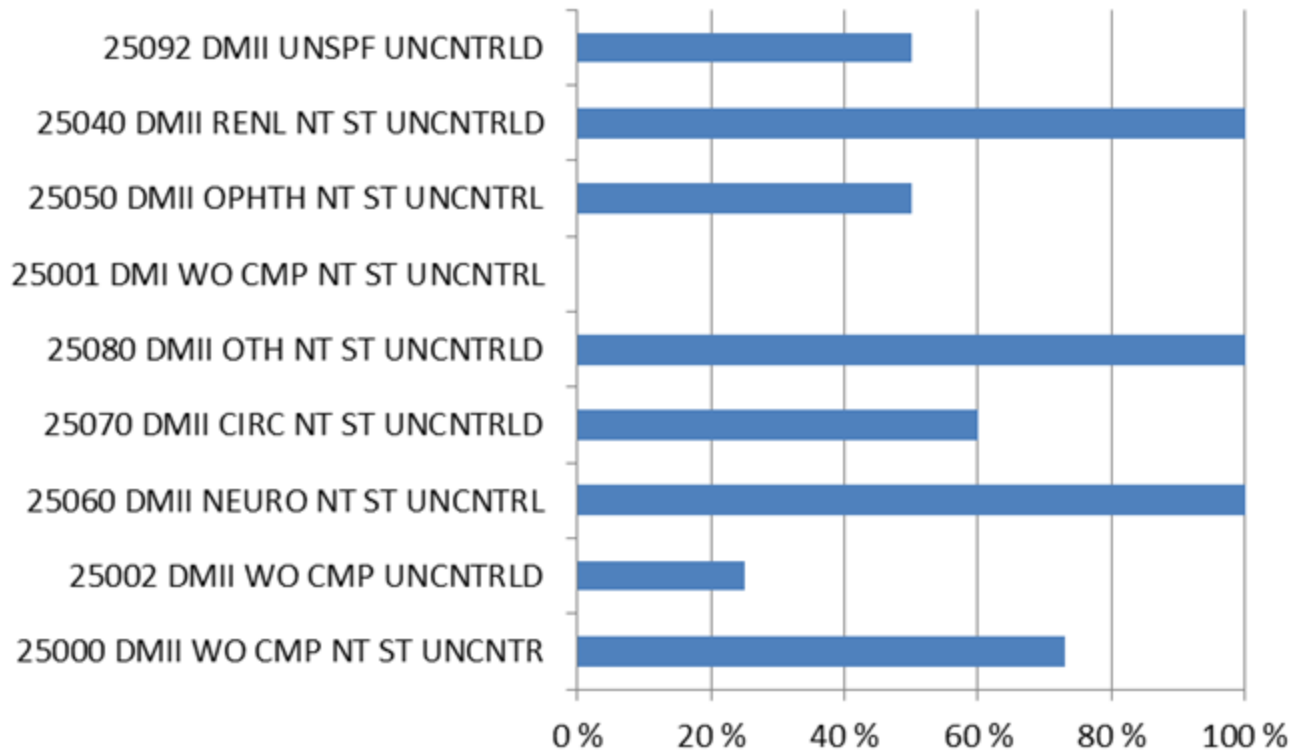
COST OF CHRONIC CONDITIONS

Relative Costs of Diabetics and Non-Diabetics for Selected DRGs



IDENTIFYING CHRONIC CONDITIONS

Percent of Diabetics Identified from Inpatient Claims - DRG 470



DEAL STRUCTURE

HOW SHOULD I STRUCTURE BUNDLED PAYMENT CONTRACTS?

Episode trigger

- DRG
- Diagnosis or Procedure

Length

- 30 days
- 90 days

Payment arrangement

- Shared savings
- Discounted price

Target computation

- Historical
- Cohort-based

Outliers

- Limited risk
- Lost opportunity

Excluded services

- Build from ground up vs. carve from total
- Include by DRG/diagnosis vs. specialty

PRICING COMPARISONS

What components do I need to include in my price?

How does my price compare to benchmark?

Where am I different and why?

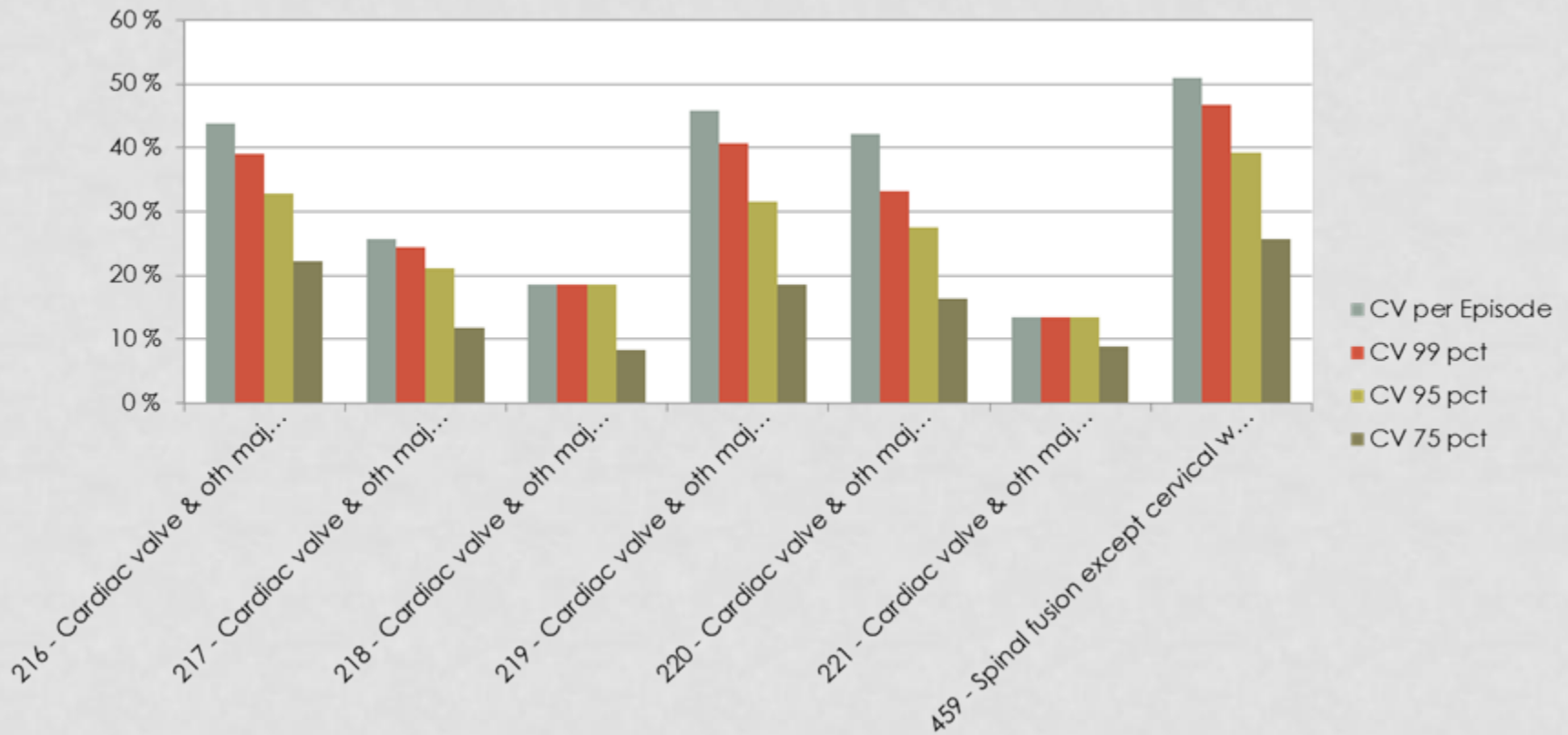
	Hospital					Referral Region				
	# of Episodes	Average Benchmark Episode Price	Average # Claims Per Episode	Average Benchmark Payment per Claim	Average Benchmark Payment per Episode	# of Episodes	Average Benchmark Episode Price	Average # Claims Per Episode	Average Benchmark Payment per Claim	Average Benchmark Payment per Episode
Initial Admission	354	\$31,480		\$12,047	\$12,047	9,576	\$32,598		\$11,586	\$11,586
Readmission			0.19	\$7,982	\$1,488			0.33	\$7,481	\$2,468
Inpatient Rehab			0.60	\$10,110	\$6,026			0.34	\$11,107	\$3,789
Home Health Care			0.87	\$3,084	\$2,684			0.67	\$2,949	\$1,978
SNF			0.45	\$6,700	\$3,047			0.99	\$6,654	\$6,570
LTCH			0.01	\$31,772	\$269			0.00	\$29,975	\$106
Physician Inpatient			20.63	\$149	\$3,080			25.97	\$129	\$3,357
Physician Non Inpatient			58.72	\$40	\$2,349			52.98	\$39	\$2,049
OPD Inpatient			0.01	\$241	\$2			0.08	\$195	\$16
OPD Non Inpatient			1.52	\$207	\$315			1.73	\$288	\$500
DME Inpatient			0.29	\$45	\$13			0.22	\$67	\$14
DME Non-Inpatient			2.45	\$65	\$159			2.18	\$75	\$165

ARE MY PAYMENT TARGETS CALCULATED CORRECTLY?

- Is your price based on **your own history** or some sort of **benchmark**?
- Benchmarks need to be properly adjusted for **regional variation** – Albany NY – Springfield MA HRR
- Have **changes to payments** been properly accounted for (RAC 1 day stays, DRG weight shifts, SNF RUGS III to RUGS IV)?
- End of period claims – **prorated** or not, how is proration handled?

OUTLIER LIMITS AND RISK

Coefficients of Variation at Outlier Limits



OUTLIERS AND RISK

Effect of Outlier Limits on Episode Risk and Opportunity



“SAVINGS” ARRANGEMENTS

Discounts (BPCI)

- Fixed, definite payment
- “Sunk cost”
- No disincentive for savings
- Payer return assured

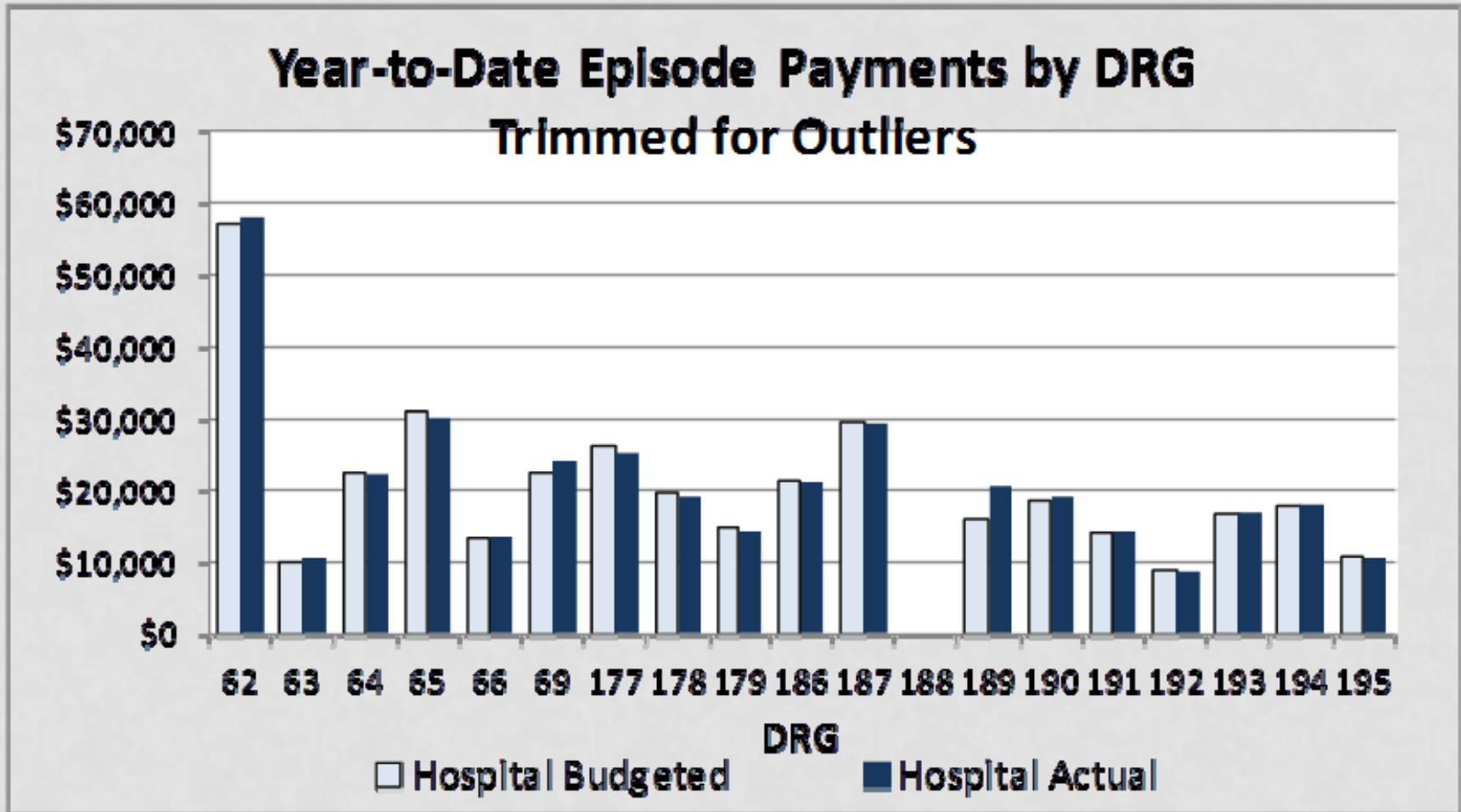
Shared Savings (MSSP)

- Indefinite based on operations
- Potential disincentive for savings
- Payer return not assured

Amount of “savings” is irrespective of the model

PERFORMANCE MONITORING

ACTUAL PERFORMANCE VS. BUDGET









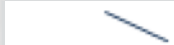



TARGET VARIANCE

DRG	Total Episode Paid	Variance from Target	Pct Variance from Target
Cardiac valve	\$42,191,197	\$499,286	-1%
216 - Cardiac valve & oth maj cardiothoracic proc w card cath w MCC	\$16,751,307	\$152,868	-3%
217 - Cardiac valve & oth maj cardiothoracic proc w card cath w CC	\$5,415,345	\$516,277	-7%
218 - Cardiac valve & oth maj cardiothoracic proc w card cath w/o CC/MCC	\$424,686	\$7,518	16%
219 - Cardiac valve & oth maj cardiothoracic proc w/o card cath w MCC	\$14,754,994	-\$119,246	0%
220 - Cardiac valve & oth maj cardiothoracic proc w/o card cath w CC	\$4,655,054	-\$26,840	9%
221 - Cardiac valve & oth maj cardiothoracic proc w/o card cath w/o CC/MCC	\$189,810	-\$31,292	-13%
Major joint replacement of the lower extremity	\$69,162,673	\$4,368,254	10%
469 - Major joint replacement or reattachment of lower extremity w MCC	\$5,839,548	\$578,943	13%
470 - Major joint replacement or reattachment of lower extremity w/o MCC	\$63,323,125	\$3,789,310	10%
Spinal fusion (non-cervical)	\$26,380,728	\$1,583,352	1%
459 - Spinal fusion except cervical w MCC	\$3,074,137	\$238,950	8%
460 - Spinal fusion except cervical w/o MCC	\$23,306,590	\$1,344,402	0%
Grand Total	\$137,734,597	\$6,450,891	5%

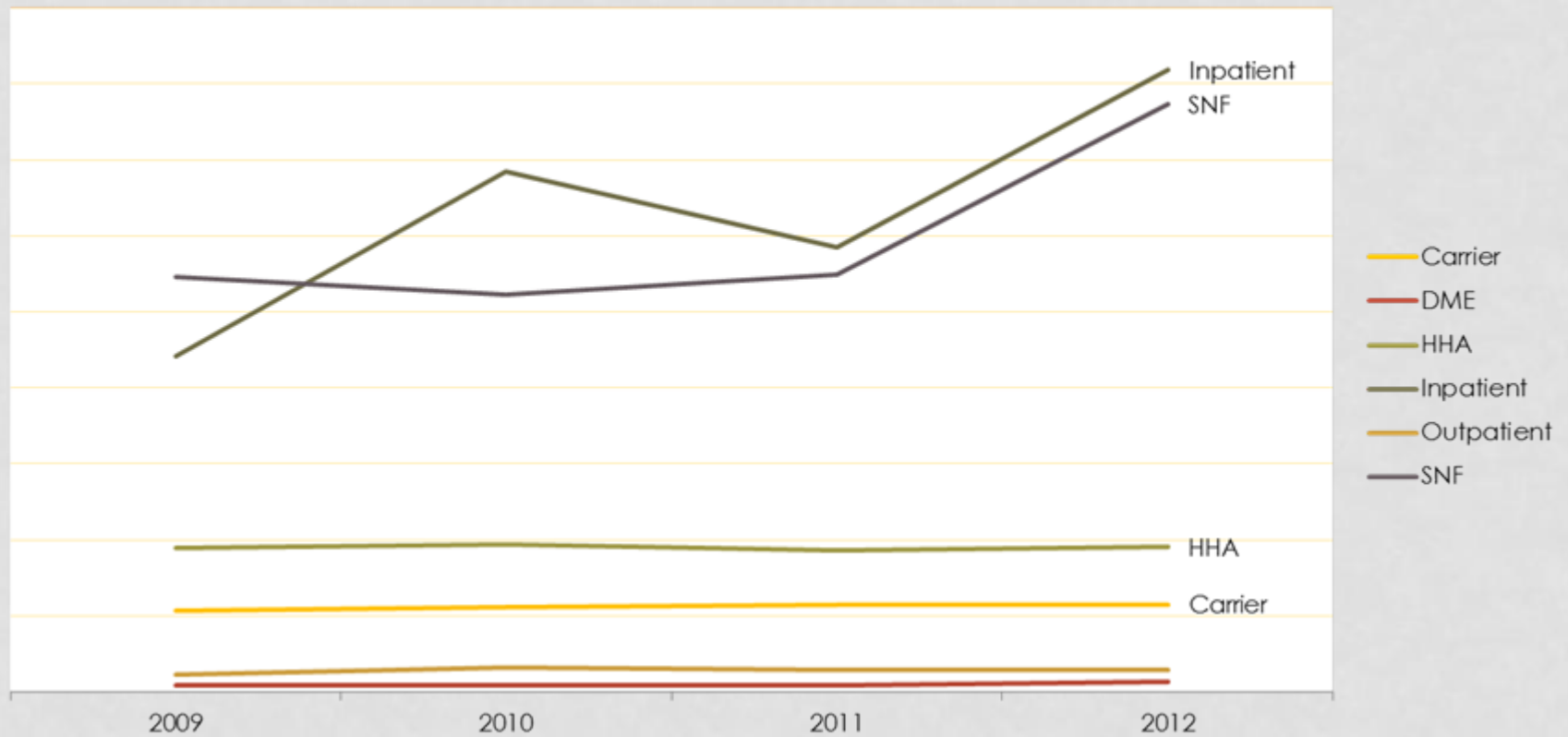
READMISSIONS

Top Readmission DRGs

	2009	2010	2011	2012	
863 - Postoperative & post-traumatic infections w/o MCC	1	3	6		
392 - Esophagitis, gastroent & misc digest disorders w/o MCC	3	2	5		
812 - Red blood cell disorders w/o MCC	1	3	5		
561 - Aftercare, musculoskeletal system & connective tissue w/o CC/MCC		5	3	1	
310 - Cardiac arrhythmia & conduction disorders w/o CC/MCC		5	3		
603 - Cellulitis w/o MCC	3	2	1	1	
560 - Aftercare, musculoskeletal system & connective tissue w CC	1	2	4		
312 - Syncope & collapse	1	1	3		
300 - Peripheral vascular disorders w CC		3	2		
176 - Pulmonary embolism w/o MCC	1	2	2		

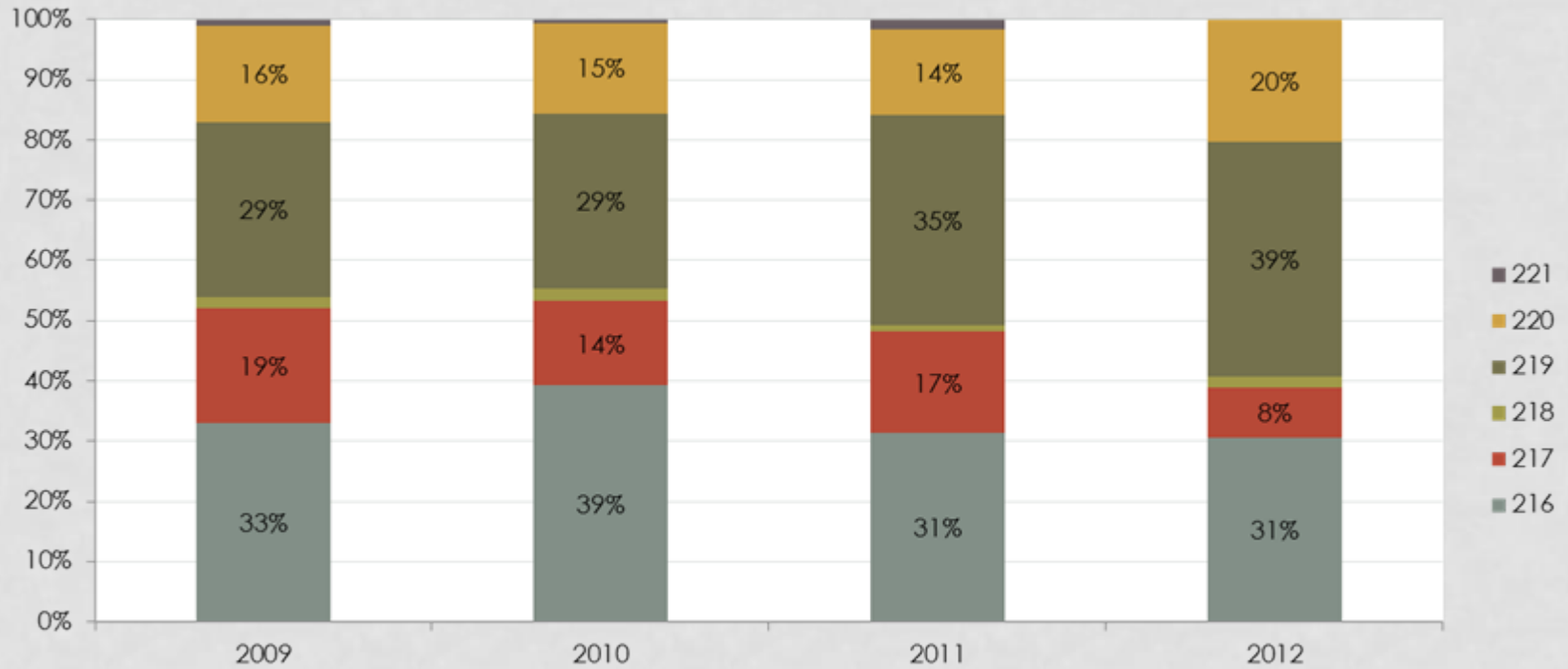
POST-ACUTE SERVICE MIX

Post-Discharge Costs



CASE-MIX

Episode Family Case Mix



EPISODES IN PROCESS

Episode Count

	January	February	March	April	May	June	July	Grand Total
216 - Cardiac valve & oth maj cardiothoracic proc w card cath w MCC	21	13	19	7	8	17	19	104
217 - Cardiac valve & oth maj cardiothoracic proc w card cath w CC	1	10	11	3	3	3	7	38
218 - Cardiac valve & oth maj cardiothoracic proc w card cath w/o CC/MCC	1	1	1			1		4
219 - Cardiac valve & oth maj cardiothoracic proc w/o card cath w MCC	16	20	17	13	10	9	20	105
220 - Cardiac valve & oth maj cardiothoracic proc w/o card cath w CC	13	7	8	3	7	6	10	54
221 - Cardiac valve & oth maj cardiothoracic proc w/o card cath w/o CC/MCC	1	1						2
459 - Spinal fusion except cervical w MCC	3	3	3	5	2	1	1	18
460 - Spinal fusion except cervical w/o MCC	44	28	40	28	25	29	38	232
469 - Major joint replacement or reattachment of lower extremity w MCC	7	6	8	9	9	9	11	59
470 - Major joint replacement or reattachment of lower extremity w/o MCC	133	119	176	96	103	104	153	884
Grand Total	240	208	283	164	167	179	259	1500

Estimation of outstanding episode costs for incomplete episodes is complicated by:

- Unknown claims payment timing
- Inconsistent costs patterns across episodes
- Small claims counts

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