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IPAP Project: EVAR Treatment of Elective and Ruptured AAA

Potential Economic Analysis

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VQI Pilot Project to Determine EVAR Cost

- Collaboration between VQI, M2S and Vizient
 - Vizient focuses on enhancing hospital financial and operational systems, with expertise in cost calculation
- 18 VQI centers submitted uniform billing data for elective EVAR procedures from 2014
 - 782 procedures performed by 108 surgeons
- M2S matched billing data with VQI clinical data
- Vizient calculated hospital costs based on known cost/charge ratio for each center to provide comparable data for analysis

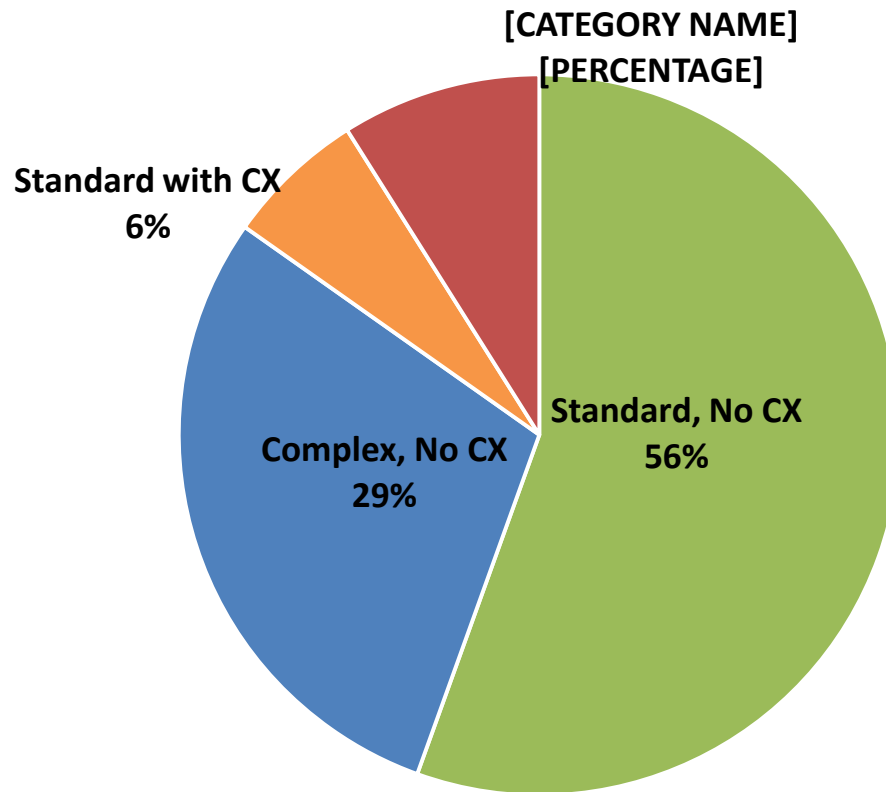
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Comparable Clinical Groups

- VQI clinical data used to define 4 groups of procedures:
 - **Standard vs complex procedures**
 - Complex = prior aortic surgery, concomitant fem-fem bypass, endarterectomy, hypogastric coil, iliac stent or bypass, renal stent, other arterial bypass
 - **With or without complications**
 - Complications = MI, CHF, dysrhythmia, respiratory, renal dysfunction, re-operation, arterial injury or embolectomy, bowel or leg ischemia, or wound complication

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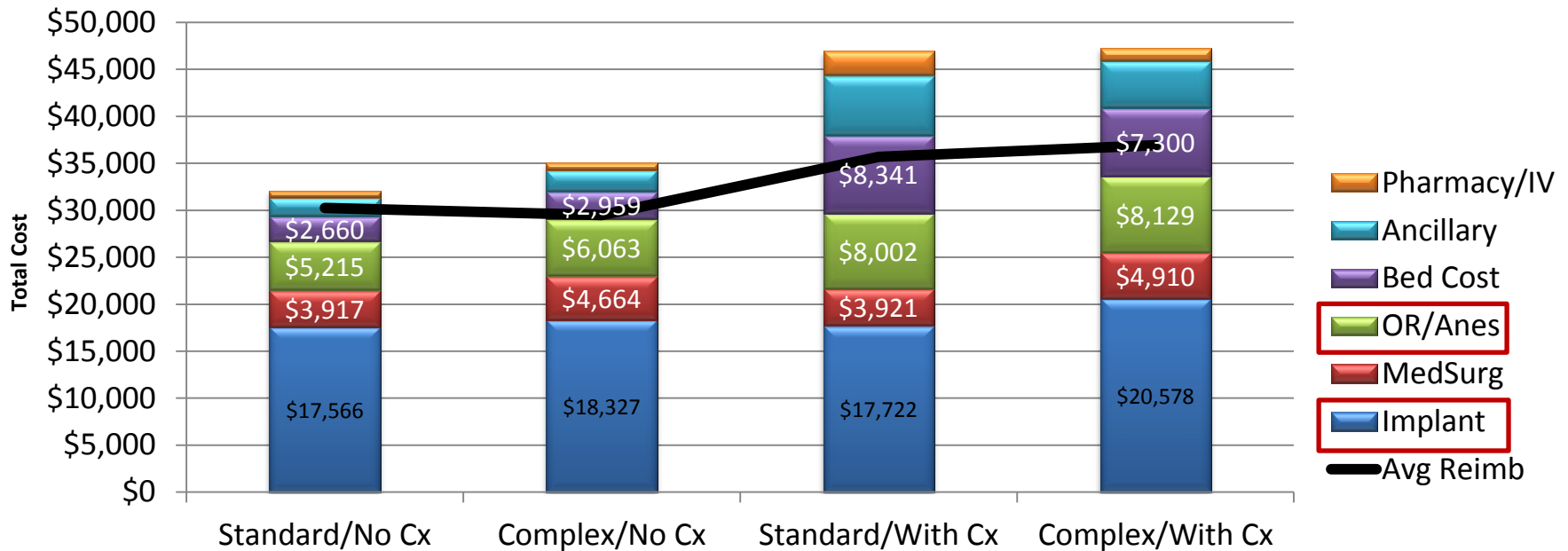
EVAR Clinical Group Distribution



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Cost Comparison per Clinical Group

Clinical Grouping Cost Variance
782 Procedures



Procedure
Distribution

56%

29%

6%

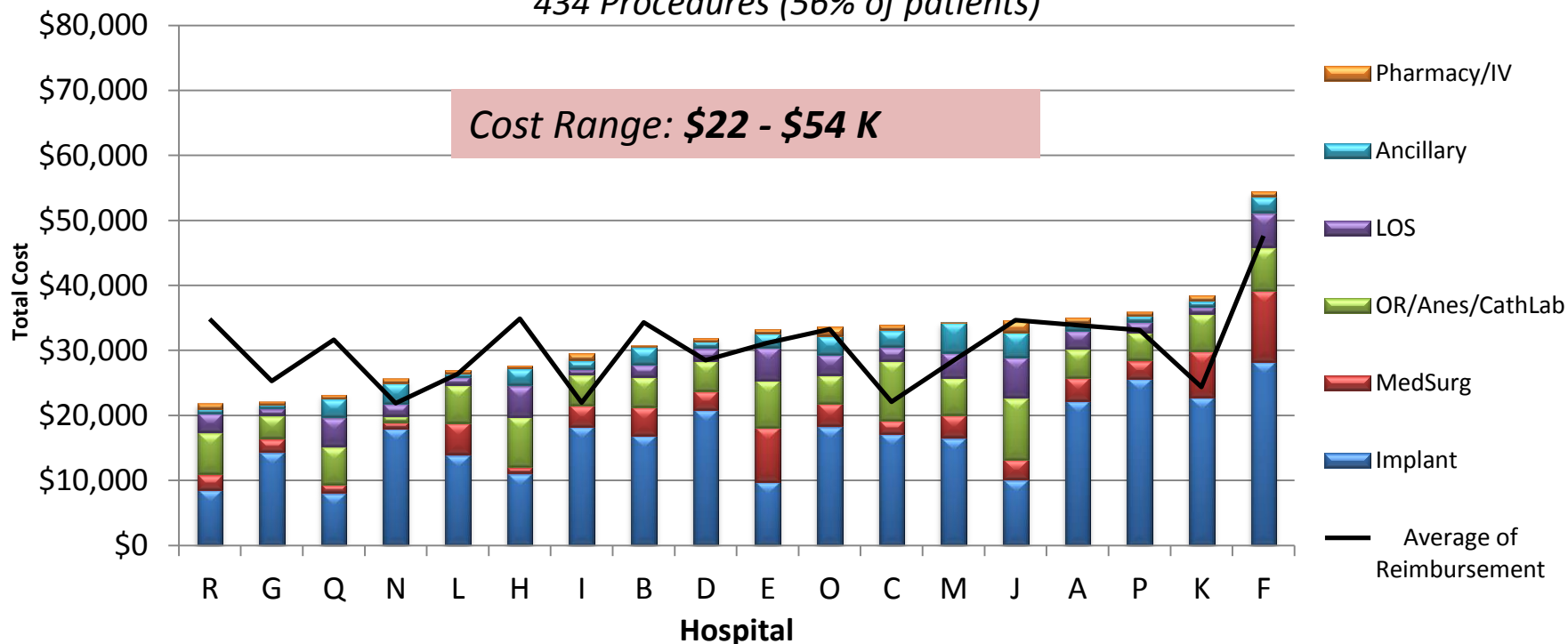
9%

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Cost Variation by Center

Standard / No Cx

434 Procedures (56% of patients)



Observations with Basic Data:

- Some hospitals are missing implant charges
- Implants may be classified in med surg segment
- Costs may be classified in procedure costs

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Adding Quality to the Value Equation

		Quality	
		High	Low
Cost	High	High Quality High Cost	Low Quality High Cost
	Low	High Quality Low Cost	Low Quality Low Cost

Provide feedback to institutions on the cost and **quality** of the care they provide.

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Adjusted MAE Rates in 18 Cost Project Centers

Center	Raw MAE	CSI	Adj. MAE	Cost
1	2%	1.2	2%	\$24.7K
2	4%	1.0	4%	\$29.0K
3	5%	1.0	5%	\$30.0K
4	8%	1.1	9%	\$59.3K
5	9%	1.0	9%	\$38.0K
6	11%	1.1	12%	\$24.9K
7	11%	1.6	17%	\$34.3K
8	14%	1.3	18%	\$26.5K
9	15%	1.3	20%	\$30.7K
10	13%	1.6	20%	\$39.2K
11	13%	1.7	21%	\$43.7K
12	20%	1.4	28%	\$38.1K
13	25%	1.3	33%	\$39.5K
14	18%	1.9	33%	\$36.6K
15	16%	2.2	36%	\$30.8K
16	38%	1.5	57%	\$30.4K
17	29%	2.1	61%	\$40.0K
18	33%	2.0	65%	\$43.2K

EVAR 2014, 18 centers

Raw MAE rates, 2%-33%

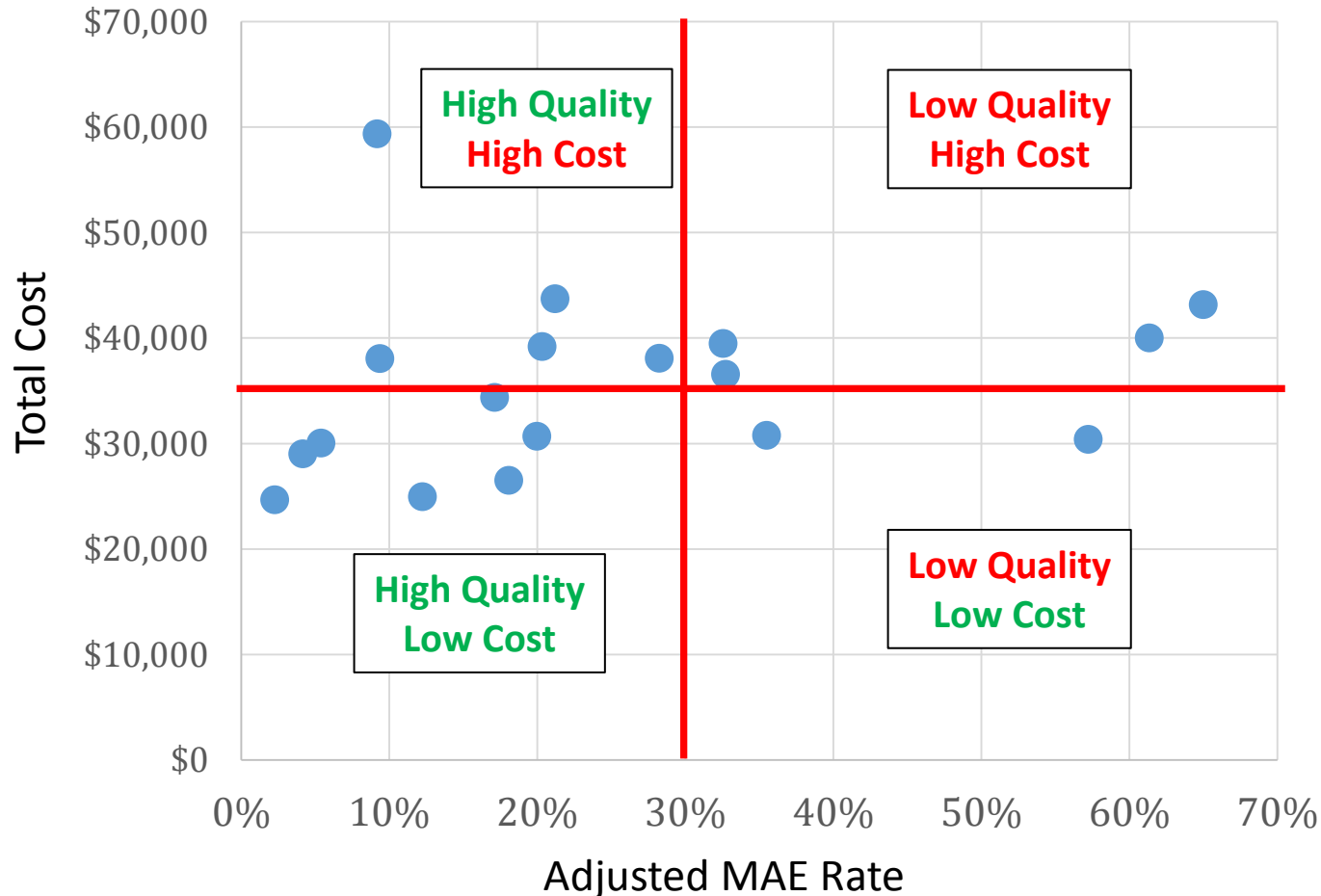
CSI range, 1.0 - 2.2

Adjusted MAE 2% - 65%

Cost, \$24.7 - \$59.3

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Quality v. Cost in EVAR Pilot Study – 18 Hospitals



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Potential for Economic Analysis in IPAP

- How to merge/compare costs across countries?
 - Can registries/centers collect cost/charge data?
 - Use proxies for cost: LOS, procedure time, MAEs, number of device components used
- Assign common, relative costs to proxies to allow comparison across countries

- Discussion