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Inpatient Prices and Hospital Profitability in Delaware

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Background

- ▶ Background: Johns Hopkins research is supported by Arnold Foundation project to support and inform state-level efforts to lower private sector prices
- ▶ Analytical method:
 - ▶ Demonstrate the price variation across services (e.g., type of surgery), geographic regions (MSA), and type of patient (plan type)
 - ▶ Compare private sector prices to Medicare prices
 - ▶ Show extent of practices that increase prices for patients, e.g., out-of-network billing
- ▶ Today:
 - ▶ Average inpatient prices overall and for selected procedures in Delaware
 - ▶ Variation in prices by MSA in Delaware
 - ▶ Comparison of unadjusted commercial and Medicare prices in DE, PA, MD
 - ▶ Policy options to address high private sector prices



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Analysis of Inpatient Prices and Hospital Profitability in Delaware



Data: MarketScan Commercial Claims

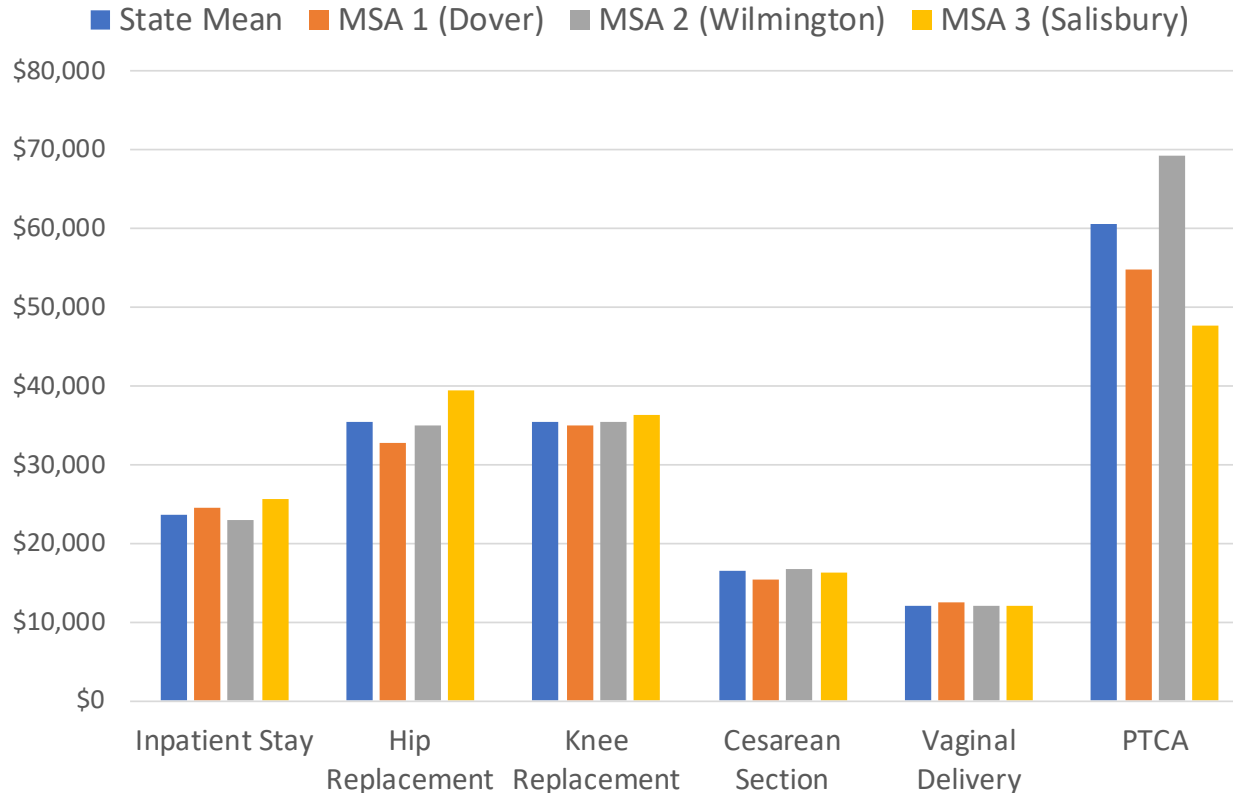
- ▶ Collects private-sector health insurance data from approximately 350 different insurers
- ▶ Captures person-specific clinical utilization, expenditures, and enrollment across settings
- ▶ Includes all active employees, early retirees, COBRA enrollees and dependents insured by contributing employer-sponsored plans
- ▶ Large sample sizes allow for meaningful segmentation
 - ▶ Captures ~36% of 18-64 year old individuals who live in DE and have employer-sponsored plans
 - ▶ High-quality and reliable coding
- ▶ Limitations: convenience sample (not sure who is included and excluded), mostly from large employers, cannot look at specific providers or insurers

Analysis Sample

- ▶ **MarketScan sample:** 130,000 people age 18-64 who lived in Delaware from 2012-2016
- ▶ **Unit of analysis:** Inpatient admission
- ▶ **Main outcome:** Total spending per admission, Total spending by service
- ▶ **Geography:** State, Metropolitan Statistical Area

Year	Total Mkt Sample	Inpatient Mkt Sample	Medicare 20% Sample
2012	135,020	7,247	-
2013	128,983	6,834	-
2014	136,957	6,845	-
2015	132,887	6,085	-
2016	124,048	6,424	5,913

Private prices are relatively similar for inpatient services across MSAs

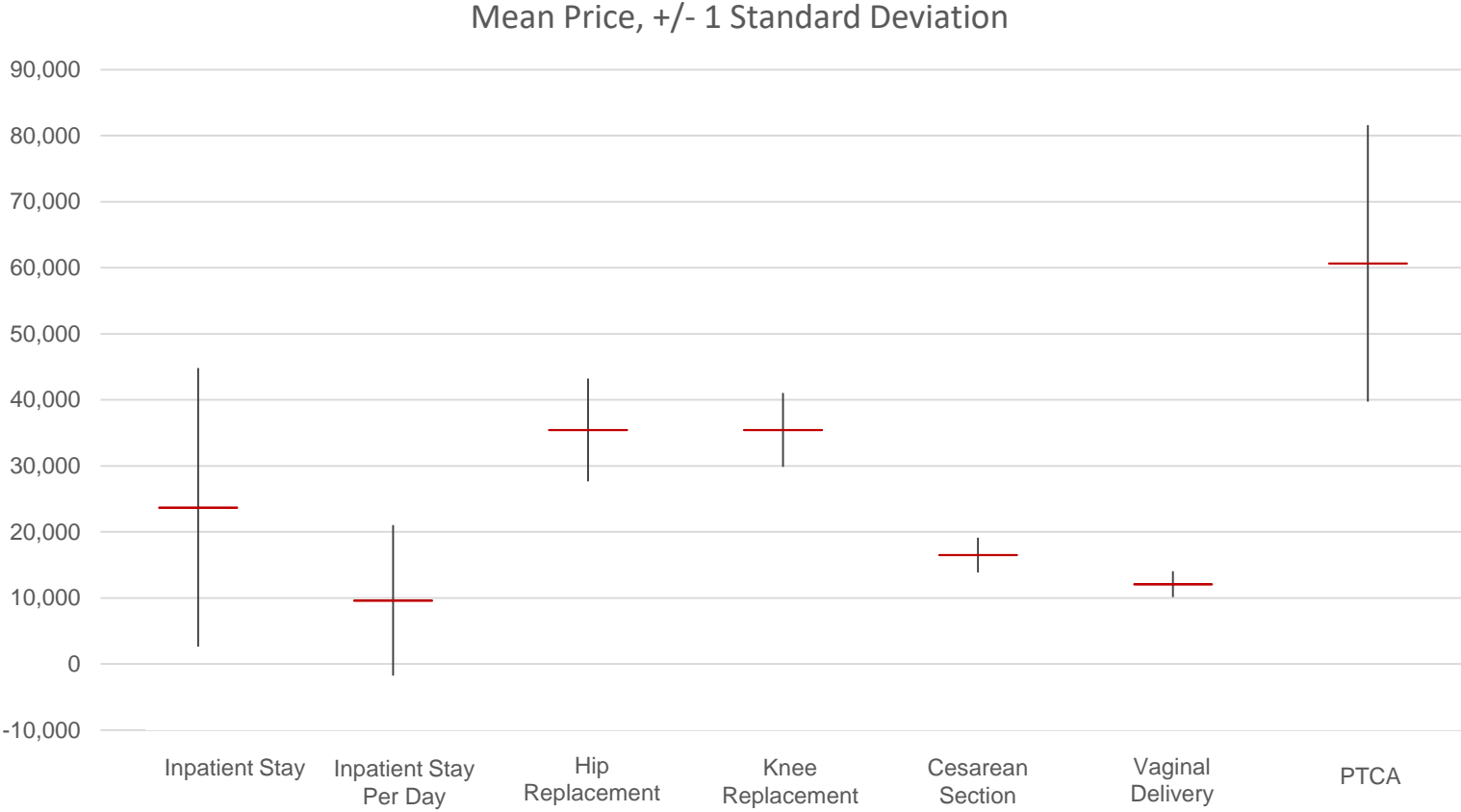


Note: PTCA: Percutaneous transluminal coronary angioplasty

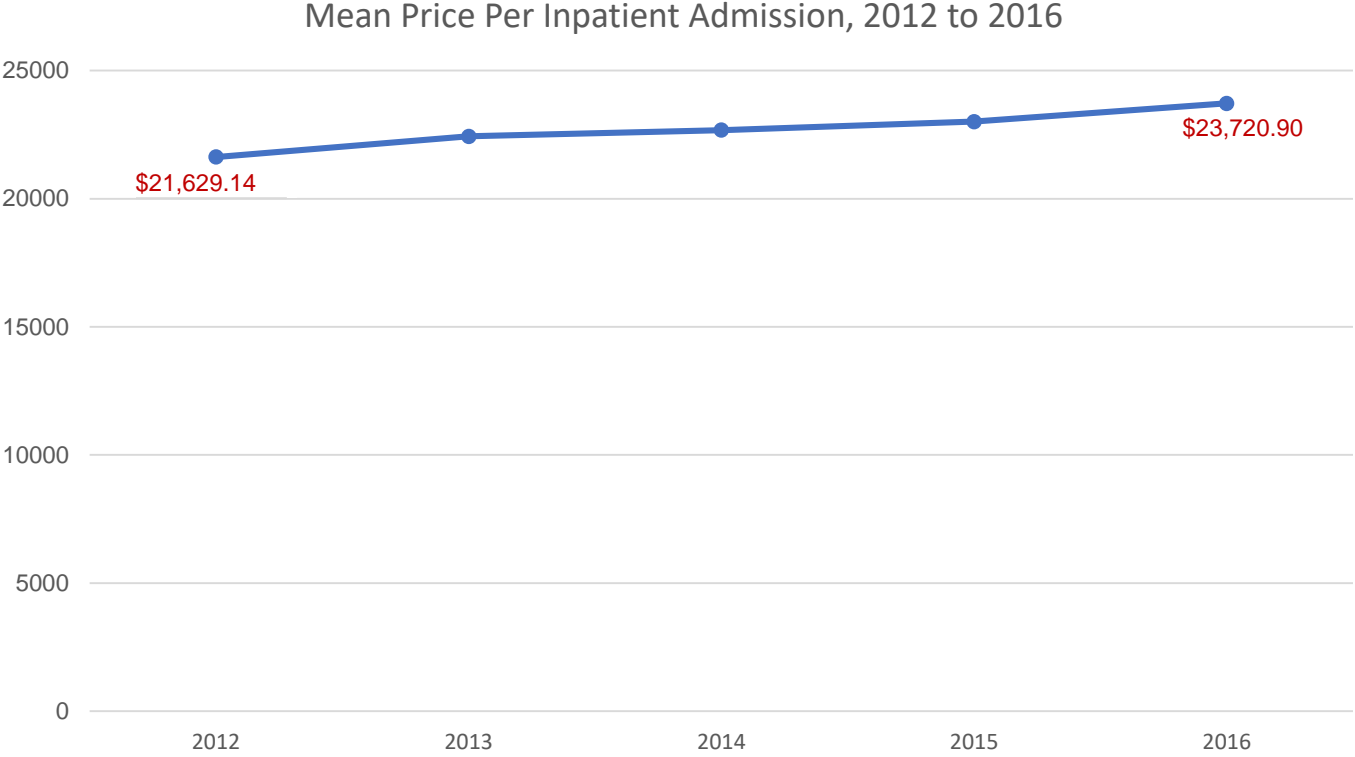
Private prices for select inpatient services (\$), Delaware 2016

	State Mean	MSA 1 (Dover)	MSA 2 (Wilmington)	MSA 3 (Salisbury)
Inpatient Stay	23,721	24,602	22,892	25,735
Hip Replacement	35,444	32,740	35,011	39,491
Knee Replacement	35,459	34,959	35,374	36,341
Cesarean Section	16,498	15,306	16,756	16,372
Vaginal Delivery	12,098	12,391	12,033	12,081
PTCA	60,653	54,707	69,318	47,661

Variation in private prices for select inpatient services, Delaware 2016



Small increase in private price of average inpatient admission in Delaware over time



Private sector prices are **twice** Medicare prices

	Delaware Private Mean, \$	Delaware Medicare Mean, \$	Delaware ratio of Private: Medicare
Inpatient Stay	23,721	12,282	1.93
Hip Replacement	35,444	13,568	2.61
Knee Replacement	35,459	13,568	2.61
PTCA	60,653	12,893	4.70

Variation in private and Medicare prices for select inpatient services, DE 2016



Delaware Hospitals' Financial Performance

- ▶ We used Medicare cost reports to examine the financial viability of Delaware hospitals
- ▶ How much ability do they have to accept lower rates and still remain profitable?

Hospital Costs: How Do Hospitals Respond to Lower Prices?

- ▶ We examined what the Medicare Prospective Payment Commission (MedPAC) has said about the ability of hospitals to accept lower prices
- ▶ Hospital costs are **flexible and hospitals respond by lowering their costs**
 - ▶ “Hospitals under financial pressure tend to have lower costs. High pressure equals low cost. Low pressure equals high cost.”
 - ▶ “Costs do vary in response to financial pressure and low margins on Medicare patients can result from a high cost structure that has developed in reaction to high private payers rates.”
 - ▶ “Lack of pressure is more common in markets where a few providers dominate and have negotiating leverage over payers.”

Hospital Medicare Margins

- ▶ Average Medicare margin in 2016 for efficient hospitals: **-1%**
 - ▶ Effectively Medicare pays the overall cost of efficient hospitals
- ▶ Average Marginal Medicare margin in 2016: **8%**
 - ▶ Hospitals earn a profit on each additional Medicare patient

Delaware Hospital Market

Region	Hospital	City	Market share
Wilmington, DE HHI: 0.57	Christiana Care Health	Wilmington	73%
	St. Francis Hospital	Wilmington	7%
	Kent General Hospital	Dover	20%
Salisbury, MD HHI: 0.28	Nanticoke Memorial Hospital	Seaford	15%
	Beebe Medical Center	Lewes	26%
	Milford Memorial Hospital	Milford	9%
	3 hospitals in Maryland	Salisbury, Berlin, Crisfield	50%

Centers for Medicare and Medicaid Services (CMS) Medicare cost reports 2016

<https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Cost-Reports/>

Dartmouth Atlas http://www.dartmouthatlas.org/tools/downloads.aspx?tab=39#zip_crosswalks

Delaware Hospital Profitability Is Better Than the US Average

Hospital	City	Beds	Profit (million)	Profit Margin
Christiana Care Health	Wilmington	1,063	\$282	17%
St. Francis Hospital	Wilmington	180	-\$7	-5%
Kent General Hospital	Dover	281	\$73	17%
Nanticoke Memorial Hospital	Seaford	94	\$12	9%
Beebe Medical Center	Lewes	193	\$28	7%
Milford Memorial Hospital	Milford	124	\$14	10%

Centers for Medicare and Medicaid Services (CMS) Medicare cost reports 2016

<https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Cost-Reports/>



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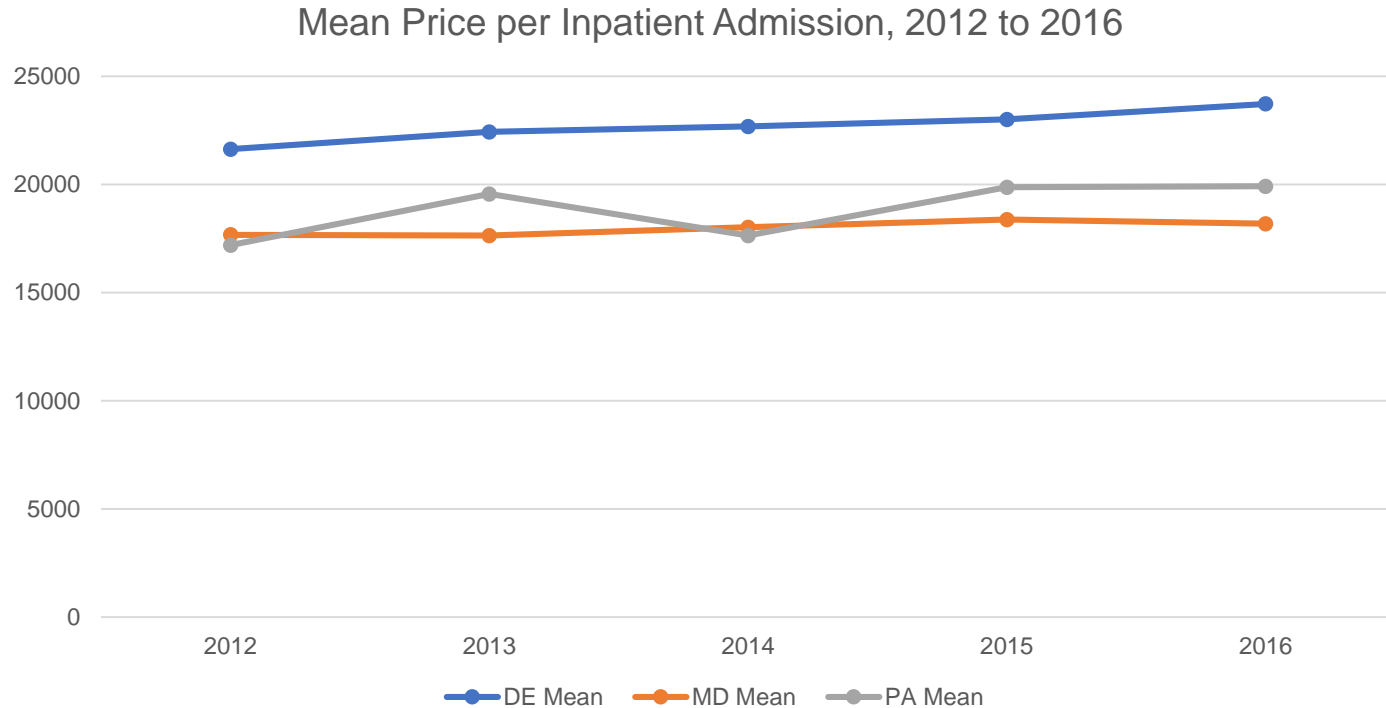
Comparison to Surrounding States: PA and MD



Private prices vs Medicare prices, DE, MD, and PA [2016]

	DE			PA			MD		
	Private (\$)	Medicare (\$)	Ratio	Private (\$)	Medicare (\$)	Ratio	Private (\$)	Medicare (\$)	Ratio
Hip Replacement	35,443	13,568	2.61	27,559	13,025	2.12	26,254	12,977	2.02
Knee Replacement	35,459	13,568	2.61	26,836	13,025	2.06	24,587	12,977	1.89
PTCA	60,653	12,893	4.70	31,296	12,378	2.53	25,399	12,331	2.06

Private prices in DE vs MD and PA, over time





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Policy Considerations for State of Delaware Group Health Program



Policy Considerations for State of Delaware Group Health Program: Within SEBC Authority

- ▶ Close gap between and Medicare payments and payments for state employee health care services over time
 - ▶ For example, 200% Medicare in year 1 → 180% → 160% → ... → 100% by year 6
 - ▶ Outcomes: Improve access, reduce state spending
 - ▶ Other states are initiating this type of reference pricing for state employee plans:
 - MT: 234% Medicare
 - CA: Capped payments for certain procedures/services after finding wide variation in prices with no quality difference
 - ▶ Generally accompanied by balance billing regulation and transparency efforts
- ▶ Review existing TPA contracts and engage in dialogue with TPAs

Policy Considerations for State of Delaware Group Health Program: Legislative Actions

- ▶ Regulation of facility fees outside of hospitals for state employee plans
 - ▶ As physician offices are acquired by hospitals, facility fees appear for services provided in these offices. Patients are used to going to the same offices and not being charged this fee. This additional fee is an incentive for consolidation between hospitals and physician offices which raises prices.
 - ▶ Proposal: Prohibit facility fees for off-campus primary care
 - ▶ CT legislation: Notify patients about facility fees being charged, no facility fee for outpatient E&M services, limit fees for uninsured, report facility fee data
- ▶ Push for state to remove regulatory barriers, e.g., Certificate of Need
- ▶ Initiate broader payment reform, e.g., all-payer rate setting, global budgets, all-payer ACO that other private insurers and self-insured companies can use

Possible next steps – We would like your recommendations!

- ▶ Risk-adjustment
- ▶ Additional procedures (e.g., outpatient, office-based)
- ▶ Analysis of factors that are contributing to the variation in prices, e.g. hospital competition
- ▶ Comparison to national prices from MarketScan data
- ▶ Prices by insurance type

Appendix

Private prices in DE, 2014

	N	Mean \$	Median \$	SD \$
Inpatient Stay	6,709	21,376.46	14,477.93	20,346.97
Inpatient Stay Per Day	6,709	8,028.18	5,225.45	9,570.77

	N	Mean \$	Median \$	SD \$
Hip Replacement	110	38,735.51	37,143.90	7,277.78
Knee Replacement	235	34,039.38	33,137.92	6,707.77
Cesarean Section	212	15,756.40	15,798.86	2,761.263
Vaginal Delivery	552	10,114.46	9,852.61	2,212.36
PTCA	33	54,574.12	54,245.92	19,054.17

Private prices in DE, 2016

	N	Mean \$	Median \$	SD \$
Inpatient Stay	6,296	23,720.90	16,162.23	21,102.98
Inpatient Stay Per Day	6,296	9,643.74	5,874.24	11,401.77

	N	Mean \$	Median \$	SD \$
Hip Replacement	127	35,443.88	36,299.92	7,783.65
Knee Replacement	238	35,459.02	36,497.68	5,601.35
Cesarean Section	206	16,498.36	16,132.74	2,635.56
Vaginal Delivery	603	12,097.89	12,383.30	1,945.03
PTCA	60	60,653.43	59,299.09	20,941.55

Medicare prices in DE, 2016

	N	Mean \$	Median \$	SD \$
Inpatient Stay	9,591	12,281.57	8,478.11	15,179.23
Inpatient Stay Per Day	9,591	3,462.33	2,174.92	4,378.77

	N	Mean \$	Median \$	SD \$
Hip Replacement	217	13,640.86	13,817.55	6,711.93
Knee Replacement	342	12,602.66	12,064.02	5,273.29
Cesarean Section	-	-	-	-
Vaginal Delivery	-	-	-	-
PTCA	82	13,802.51	14,120.86	7,267.41

Private prices in DE vs MD and PA [2016]

	DE			PA			MD		
	N	Mean \$	SD	N	Mean \$	SD	N	Mean \$	SD
Inpatient Stay	6,296	23,720	21,102	33,782	19,911	19,459	11,285	18,184	18,501
Hip Replacement	127	35,443	7,783	582	27,559	10,540	183	26,254	9,806
Knee Replacement	238	35,459	5,601	865	26,836	10,059	252	24,587	6,332
Cesarean Section	206	16,498	2,635	851	14,386	4,767	284	13,029	4,655
Vaginal Delivery	603	12,097	1,945	3,055	11,217	4,463	1,137	10,924	3,144
PTCA	60	60,653	20,941	286	31,296	14,080	62	25,399	15,505

Medicare Payment Method

- ▶ Medicare pays most hospitals using a prospective payment system, which specifies a flat rate for each stay that depends primarily on a patient's medical condition or treatment
- ▶ This rate is computed from national base rates for 1) operating costs and 2) capital costs, adjusted for A) the relative costliness of the patient (DRG) and B) the geographic differences in input prices
- ▶ This approach estimates “the payments that the Medicare FFS program would have made for that admission.” This amount includes the Medicare beneficiary's cost-sharing amount. We exclude IME payments and pass-through amounts.

Medicare Payment Method

- ▶ For example, the operating base payment rate is calculated as (CBO, 2017):

Adjusted for geographic factors

$$\left(\text{Wage index} \times \text{Labor-related portion} \right) + \text{Nonlabor-related portion} \times \left(\text{COLA, if applicable} \right)$$

Adjusted for case mix

$$\text{Base rate adjusted for geographic factors} \times \text{DRG weight} \longrightarrow \text{DRG}$$

Wage index > 1.0000

68.8% of labor-related portion is adjusted for area wages

Wage index ≤ 1.0000

62% of labor-related portion is adjusted for area wages