Commercial Payer Reimbursement Discrepancies: A Multivariate Analysis of Geography, Insurer, and Subspecialty

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Background

- The Transparency in Coverage Act implemented in 2022 brought about newfound access to benchmarking insights across medicine.
- However, the published rates are often convoluted and difficult to interpret, negating much of their potential to empower physicians in negotiations with insurance payers.

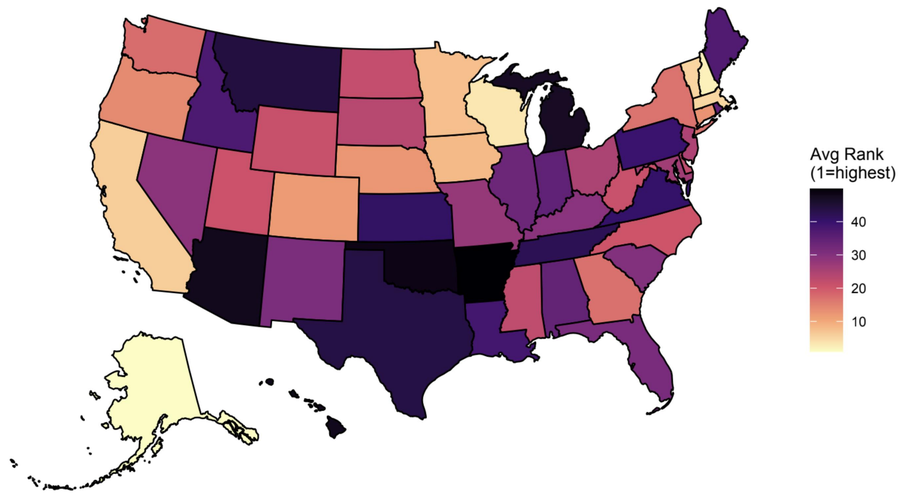
Objective

- To address this gap, we examined variability in commercial reimbursement for common urologic procedures, focusing on state, payer, and provider taxonomy differences.

Methods

- State (51 jurisdictions), payer (Aetna, Blue Cross Blue Shield, Cigna, and United Healthcare), and taxonomy (Female Pelvic Medicine & Reproductive Surgery, Pediatric Urology, and General Urology) were independently assessed via ANOVA, followed by pairwise contrasts.
- Further, we used linear mixed-effects models to partition variance across hierarchical levels, treating state, payer, and taxonomy as random effects.
- Analyses were performed using GraphPad Prism and R Software.

Geographic and payer-driven disparities dominate reimbursement patterns, highlighting the urgency of transparent benchmarks and equitable payment policies to sustain a fair and distributed urologic workforce.



Analysis	Billing Code	F (ANOVA)	F (Welch)	P-value	r^2	Attributable %
State	52000	8.636	15.92	<.00001	0.4705	40.9%
	51798	6.744	5.948	<.00001	0.4525	43.5%
	50230	9.189	10.61	<.00001	0.4981	48.6%
	55866	9.133	6.77	<.00001	0.4866	46.7%
	52601	9.638	8.082	<.00001	0.5026	50.3%
	55700	7.61	6.692	<.00001	0.4417	39.6%
	76870	10.33	12.66	<.00001	0.5245	50.4%
	51725	12.01	31.08	<.00001	0.5689	53.3%
Taxonomy	52000	7.138	6.589	.0009	0.0259	2.7%
	51798	3.892	4.797	.0166	0.0166	1.3%
	50230	6.90	5.562	.0011	0.0262	2.7%
	55866	6.384	5.669	.018	0.0236	2.5%
	52601	6.833	5.338	.0012	0.0252	2.6%
	55700	4.965	4.616	.0073	0.0183	2.4%
	76870	5.251	4.810	.0056	0.0232	2.6%
	51725	5.473	4.585	.0045	0.0218	2.4%
Payer	52000	22.00	19.69	<.00001	0.1250	16.1%
	51798	15.03	13.03	<.00001	0.0893	9.6%
	50230	5.367	5.82	.0012	0.0304	3.6%
	55866	16.09	14.38	<.00001	0.0837	9.6%
	52601	11.26	11.87	<.00001	0.0602	6.6%
	55700	29.55	27.96	<.00001	0.1428	16.6%
	76870	10.58	13.96	<.00001	0.0577	6.1%
	51725	11.05	15.21	<.00001	0.0616	6.7%

Results

- ANOVA revealed significant differences across taxonomies, with Pediatric Urology consistently reimbursed at higher rates than General Urology ($p<0.01$ across most CPTs).
- Further, the multilevel model showed that when partitioning variance, taxonomy accounted for only 1–3% of total variability, compared to 40–55% attributable to state and 6–16% to payer.
- Thus, specialty differences exist with pediatric urologists universally receiving higher reimbursement across billing codes, but geographic and payer effects dominate the variability in reimbursement.

Conclusions

- These vast discrepancies across each assessment prove the lack of standardized reimbursement across urologic physicians for the same procedures.
- This inequitable framework undermines fairness and transparency in physician payment.
- We urge for clearer dissemination of payer-level benchmarks and the development of policies that promote parity and equity in reimbursement across geography and subspecialty.