

A Decade of Medicare Part B Reimbursement to Plastic Surgeons: Gender Pay Gaps Continue to Persist

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INTRODUCTION

- **Persistent Gender Pay Gap:** Despite increasing female representation in medicine, gender-based compensation disparities persist across specialties^{1,2}.
- **Systemic Barriers to Equity:** Female surgeons face underrepresentation, bias, and barriers to equal pay, influenced by academic rank, industry payments, career advancement, and research productivity^{3,4,7,14,15,16,17}.
- **Medicare and Compensation Disparities:** Research shows that female surgeons receive lower industry payments⁶, lower reimbursement rates, and perform fewer procedures compared to male colleagues⁷⁻¹². These disparities can impact patient care and healthcare outcomes⁵.
- **Pay Gaps Across Specialties:** Notable gender pay gaps exist in neurosurgery, colorectal surgery, and orthopedic surgery^{4,7,8}. Plastic and Reconstructive Surgery (PRS) follows this trend, with a national survey revealing a significant gender-based wage difference among board-certified plastic surgeons¹³.
- **Medicare's Role in Income:** Medicare Part B reimburses surgical procedures, supplies, and follow-up care, making it a key revenue source for plastic surgeons. However, gender-based disparities within Medicare's reimbursement model remain unexamined.
- **Study Objective:** This study analyzes a decade (2013-2022) of Medicare Part B reimbursement data to identify gender-based pay disparities in plastic surgery and inform strategies for equitable compensation.

AIM

This study examines gender-based disparities in Medicare Part B reimbursements among plastic surgeons from 2013-2022. We use CMS data to assess pay differences, practice patterns, and geographic variations while controlling for key factors such as procedure volume, billing practices, and patient demographics.



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Figure 1. U.S. Geographic Variations in Surgeon Compensation by Sex

Medicare Payment Disparities Between Male and Female Plastic Surgeons Across U.S. States

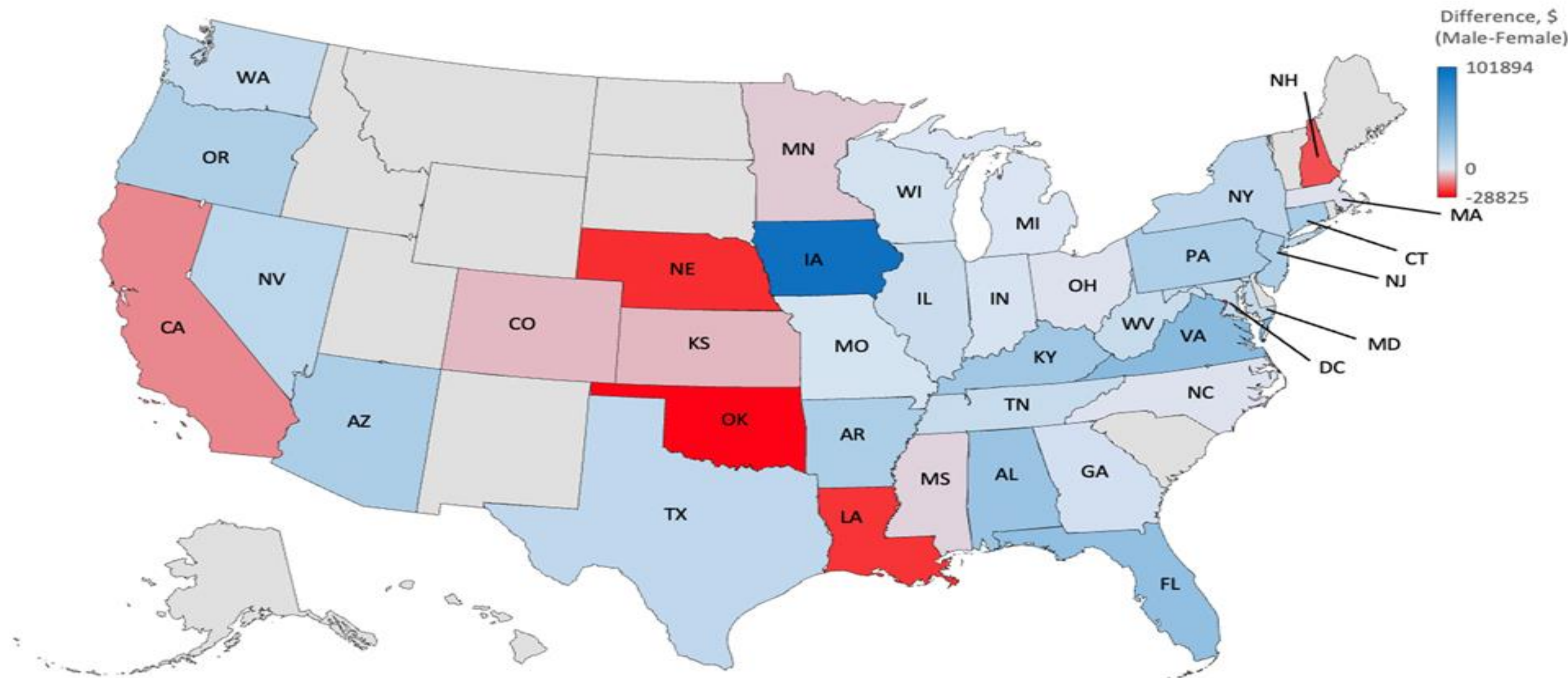


Table 1. Unadjusted Medicare charges, payments, practice volume, and location metrics by surgeon gender

Variable	Female	Male
Plastic Surgeons		
Total No. (%)	6,752 (16.02%)	35,397 (83.98%)
Charges and payments, mean (SE)		
Total requested payment (\$)	216,546 (346,383)	347,830 (821,631)
Total Medicare payment (\$)	44,956 (118,056)	71,653 (155,363)
Payment to charge ratio	0.21	0.20
Practice Volume, mean (SE)		
Total services	363.0 (797.6)	541.2 (1220.7)
Total beneficiaries	84.0 (107.3)	122.9 (143.9)
Beneficiaries Age	69.9 (4.6)	71.3 (4.3)
Beneficiaries Risk Score	1.5 (0.7)	1.5 (0.7)
Beneficiaries Dual Medicare-Medicaid	28.7 (36.4)	32.8 (55.2)
Total Unique CPT Categories	43.0 (25.3)	56.2 (32.9)
Location		
Rural (%)	0.00%	0.00%
Semi-Rural (%)	2.55%	3.47%
Urban (%)	97.45%	96.53%

Table 2. ANCOVA model for average Medicare payments, services by year, and location metrics

Variable	Female	Male	P-value
Charges and payments, mean (SE)			
Average Total Medicare Payment, \$	74,604 (3,642)	83,228 (2,785)	0.0019
Services Provided by Year, mean (SE)			
2013, \$	77,163 (4,009)		
2014, \$	76,283 (4,008)		
2015, \$	74,353 (4,002)		
2016, \$	73,526 (4,001)		
2017, \$	73,108 (4,044)		
2018, \$	74,860 (4,051)		
2019, \$	75,175 (4,062)		
2020, \$	79,776 (4,250)		
2021, \$	86,956 (4,316)		
2022, \$	97,959 (4,425)		
Location, mean (SE)			
Urban, \$	85,403 (2,055)		0.0081
Semi-Rural, \$	72,328 (4,994)		

METHODS

This investigation utilized the Centers for Medicare & Medicaid Services (CMS) data (2013 to 2022), analyzing 42,000+ physician entries.

Statistical analysis

- Baseline characteristics analyzed using t-tests, ANOVA (continuous variables), and chi-square test (categorical variables).
- ANCOVA models estimated average gender-based pay differences between male and female plastic surgeons.
- Controlled for
 - States, rural-urban designation, year of service
 - Total annual services, unique CPT codes, number of beneficiaries
 - Patient morbidity risk scores
- Adjusted models isolated the impact of gender on Medicare reimbursement.

RESULTS

- Male surgeons (84% of cohort) earned **\$26,000 more annually** than female surgeons (16%), with a **12% pay gap** persisting after adjustments for practice volume, patient demographics, and case complexity.
- Male surgeons performed **49% more procedures** annually(541 vs. 363) and billed for a **broader range of services** (56.2 vs. 43.0 unique CPT codes).
- Geographic disparities varied widely: **Iowa, Florida, Virginia, and Texas** had the largest gender pay gaps, while a few states (**Louisiana, Nebraska, Oklahoma**) showed **female surgeons earning more**, though these were outliers.
- Despite standardized Medicare rates, **reimbursements were ~5x lower than billed amounts**, highlighting broader payment inefficiencies.

CONCLUSIONS

This study reveals **persistent gender-based disparities** in Medicare Part B reimbursements among U.S. plastic surgeons, even after controlling for practice volume, patient demographics, and case complexity.

- **Male surgeons earned more annually**, performed a **higher volume of procedures**, and billed for a **wider range of CPT codes**
- Despite Medicare's standardized payment model, **geographic variations showed significant gender pay gaps**
- Systemic factors such as **referral biases, differences in billing practices, and procedural scope limitations** likely contribute to gender-based compensation differences. The persistence of this pay gap highlights **systemic barriers beyond reimbursement rates**, including career advancement opportunities and institutional biases.

Limitations & Future Considerations

This study is limited by its reliance on CMS data, which does not account for non-Medicare earnings, cash-pay procedures, or private insurance reimbursements. Additionally, while state-level trends were analyzed, intrastate variations and institution-specific policies influencing gender pay disparities remain unexplored. Further research is needed to assess non-billable activities, mentorship accessibility, and leadership pathways to fully understand systemic compensation gaps.

Moving Forward

Addressing gender pay disparities requires increasing transparency in referral networks, expanding mentorship opportunities, and advocating for policy reforms that promote equitable compensation and procedural access. Ensuring fair distribution of high-revenue procedures, leadership opportunities, and career advancement pathways is critical to closing the gender pay gap in plastic surgery.

BIBLIOGRAPHY

Full reference list available upon request.

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