

## Introduction

- Despite increased demand for gastroenterology services, in 2017 only 17.6% of gastroenterologists were women.
- Gender gaps in reimbursement continue to persist among healthcare providers, however much of this data is subjective and has been ascribed to the fact that there are fewer female providers who have less experience, modify their practice for family planning, and do not prioritize pay.
- There has been extensive literature regarding this topic, but not through the perspective of Medicare claims data.
- On average, physicians receive approximately 19% of their income from treating Medicare patients.
- The aim of this study was to evaluate the total amount of CMS reimbursements for gastroenterologists and identify any differences between male and female providers after adjusting for multiple factors that have been previously identified to affect differences in salary.

## Materials and Methods

- The Centers for Medicare Services Physician and Other Supplier Public Use File (POSPUF) Database displays Part B claims organized by provider.
- For each unique national provider identifier (NPI) registered in the database under the specialty "Gastroenterology" the total standardized amount reimbursed by Medicare was extracted for the year 2019.
- A linear regression model was utilized to determine the relationship between gender and total standardized Medicare reimbursement amount.
- Reimbursement amounts greater than 97.5th percentile and less than 2.5th percentile were removed to reduce outliers.
- One univariate and one multivariate-adjusted linear regression model were used to analyze the relationship between gender and CMS reimbursement.
- The multivariate model evaluated gender after adjusting for region, practice setting, number of services performed, the average complexity and age of Medicare beneficiaries, and physician experience.

## Results

- In 2019, there were a total of 2577 female gastroenterologists and 11215 male gastroenterologists.
- Of the 13,792 total gastroenterologists billing to Medicare in 2019, 13,500 (97.9%) had data regarding number of years of experience (2503 females, 10997 males)
- Men had higher median years of experience since graduation (28 vs 17).
- Men had higher median total payments (\$94416.28 vs \$56014.14), higher median total services (1047 vs 633) and higher median unique HCPCS codes billed (39 vs 32).
- The univariate unadjusted model demonstrated that female gastroenterologists received less total CMS reimbursement than their male counterparts (log  $\beta$  = -0.42 [-0.46 to -0.39]).
- After adjusting for region, practice setting, number of services performed, average complexity and age of Medicare beneficiaries, and number of years of physician experience, female gastroenterologists still received less CMS payments relative to male gastroenterologists (log  $\beta$  = -0.15 [-0.18 to -0.12]).

**Table 1.** Comparison in Centers for Medicare & Medicaid Services for years of experience, payments, services, and unique HCPCS codes billed

	Men (n = 10,997)	Women (n = 2503)	P value
Median years of experience	28	17	p <0.05
Median total payments	\$94,416.28	\$56,014.14	p <0.05
Median total services	1047	633	p <0.05
Median unique HCPCS codes billed	39	32	p <0.05

**Table 2.** Univariate model comparing CMS reimbursement for female gastroenterologists compared to their male counterparts\*

	$\beta$ [95% CI]	
	Unadjusted	Adjusted
Total CMS reimbursement	-0.42 [-0.46 to -0.39]	-0.15 [-0.18 to -0.12]

\*CMS reimbursement is log transformed to ensure normality of the data.  $\beta$  [95% CI] reflect the mean adjusted differences between women vs men and are in a log scale. The absolute magnitude of adjusted differences should not be inferred from the  $\beta$  coefficients. Results are adjusted for region, practice setting, number of services performed, average complexity and age of Medicare beneficiaries, and number of years of physician experience

## Conclusions and Discussion

- Much of the discussion regarding gender pay gaps can be subjective, especially within gastroenterology where there are persistent disparities between number of male and female providers and amount of physician experience since completing fellowship.
- But even after adjustment for region, practice setting, number of services performed, average complexity and range of Medicare beneficiaries, and number of years of physician experience, female gastroenterologists are receiving less CMS payments, which can comprise a significant portion of their annual income.
- Further objective, non-survey data such as this is warranted to provide a more accurate understanding of reimbursement inequity and help drive change from a national level to address gender-pay gaps.

## References

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