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Assessment of the gender gap in urology industry payments: An Open Payments Program data analysis

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Purpose: The Open Payments Program (OPP), established in 2013 under the Sunshine Act, mandated medical device and pharmaceutical manufacturers to submit records of financial incentives given to physicians for public availability. The study aims to characterize the gap in real general and real research payments between man and woman urologists.

Materials and Methods: The study sample included all urologists in the United States who received at least one general or research payment in the OPP database from 2015 to 2021. Recipients were identified using the National Provider Identifier and National Downloadable File datasets. Payments were analyzed by geography, year, payment type, and years since graduation. Multivariable analysis on odds of being in above the median in terms of money received was done with gender as a covariate. This analysis was also completed for all academic urologists.

Results: There was a total of 15,980 urologists; 13.6% were woman, and 86.4% were man. Compared to man urologists, woman urologists were less likely to be in the top half of total payments received (odds ratio [OR] 0.62) when adjusted for other variables. When looking at academic urologists, 18.1% were woman and 81.9% were man. However, woman academic urologists were even less likely to be in the top 50% of payments received (OR 0.55).

Conclusions: This study is the first to characterize the difference in industry payments between man and woman urologists. The results should be utilized to educate physicians and industry, in order to achieve equitable engagement and funding for woman urologists.

Keywords: Gender equity; Salaries and fringe benefits; Urology

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INTRODUCTION

Historically, men have dominated a majority of specialties in the medical field, particularly surgical subspecialties such as orthopedics, vascular surgery, and urology [1]. Over the past few decades, however, the number of women in surgical subspecialties has been rising. Since 2021, the majority of matriculants from allopathic US medical schools have been women, and in 2023, women comprised 51.8% of all graduates [2]. A concurrent increase in woman surgical trainees

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has also been observed. Notably, the percentage of practicing woman urologists has increased more than 100% from 2007 to 2019 [3]. Despite these advancements, the long-established gender inequality in medicine continues to be pervasive in urology. Literature has demonstrated that women in urology are promoted less often, receive fewer academic awards, and are less likely to hold leadership roles than men [4-6]. Man urologists were also found to receive higher median payment per patient than woman urologists and had a higher pay per work relative value unit in a review of gender-based pay gap in urology [7].

Physician compensation is complex and includes general (i.e., non-research) and research payments from industry in addition to base salaries. While there are several studies that documented gender pay gaps in base salary amongst urologists, there is limited research that analyzes gender difference in industry relationships and payments. Additionally, the current high inflation rates make adjusting to real dollars from the reported nominal dollars even more necessary, which has not been done in several previous studies [7].

The Open Payments Program (OPP) has provided publicly available data on industry funding to physicians since 2013. The Physician Payments Sunshine Act established the OPP in 2010 as a part of the Affordable Care Act. The "Sunshine Act" was designed to create transparency around financial relationships between teaching hospitals and manufacturers of drugs, medical devices, and biologics by tracking and reporting payments or transfers of value [8]. The goal of our study is to characterize gender payment discrepancy in industry payments over the last 7 years, adjusted to real dollars. We hypothesized that a greater distribution of man urologists is in the top half of payments received.

MATERIALS AND METHODS

1. Data source and study population

Data on payments made to urologists were obtained from the OPP database, which details all valuable industry payments made to physicians annually. The OPP was first published by the Centers for Medicaid & Medicare Services (CMS) in 2013. However, data from 2013 and 2014 has been archived, preventing physician gender from being identified; data from the years 2015 through 2021 was therefore analyzed for this study. Physicians receiving industry payments are documented in the OPP by name, practice location, and National Provider Identifier (NPI) number. Physician gender was identified using the 2022 NPI dataset, as NPI is also provided for each recipient in the OPP dataset. Of 13,657 urologists identified as having received payments between 2015 and 2021, 299 (2.2%) were unable to be identified by gender through this method due to their death between the start and end of the study period. Gender data for these deceased individuals was based on gender identification within their obituaries. Additionally, a sub-cohort database was created for academic urologists from all ACGME-accredited urology residencies, as more information was available about these urologists. Variables were extracted from residency program websites and the Scopus database. Nominal dollar values were converted to their real value on a monthly basis utilizing the Bureau of Labor Statistics' Consumer Price Index (CPI) relative to the basis period. CPI measures the extent of inflation through price changes in multiple categories of consumer spending. January 2014 was the basis period used in this study; therefore, all reported payments were adjusted to their value in January 2014 US dollars.

2. Co-variates

We extracted the following variables for each urologist: sum of payments, urologist gender (man or woman), degree (M.D. [doctor of medicine] or D.O. [doctor of osteopathic medicine]), years since medical school graduation, American Urological Association (AUA) section (Northeastern, New England, New York, Mid-Atlantic, North Central, Southeastern, South Central, or Western). For each academic urologists, we also extracted the following variables: residency program, state, subspecialty (general urology, urologic oncology, reconstruction, endourology, pediatric urology, andrology, female pelvic medicine and reconstructive surgery (FPMRS), minimally invasive/robotics, or transplant), rank (assistant professor, associate professor, professor, or professor emeritus), position (none, chair, vice-chair, chief, program director, associate program director, assistant program director, hospital leadership, or other/miscellaneous leadership), fellowship (yes or no), number of publications, and H-index.

3. Outcome measures

The primary endpoint was the distribution of industry payments adjusted from nominal to real dollars. The sum of payments received per physician between 2015 and 2021 was compared between man and woman urologists. Specifically, the categories of payments that were analyzed included acquisitions, compensation for serving as faculty or a speaker for an accredited Continuing Education Program (CEP), compensation for serving as faculty or a speaker for an unaccredited CEP, compensation for serving as faculty or a speaker for Medical Education Program (MEP), consulting fees, current ownership/investment interest, debt forgiveness, education, entertainment, food and beverage, gifts,

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grants, honoraria, royalty or license, travel and lodging, and research. Each urologist was stratified into two cohorts: bottom half (<median) and top half (≥median) of sum of payments.

4. Statistical analysis

Descriptive statistics consisted of median and interquartile range for continuous variables, while frequencies and percentages were reported for categorical variables. Our cohort was stratified based on gender, and the groups were compared by the Kruskal–Wallis test for continuous covariates and chi-square test for categorical covariates. Multivariate logistic regression was used to test the relationship between gender and sum of payments equal and above the median, after adjusting for all available covariates. The aforementioned analysis was repeated in the sub-cohort of academic urologists.

Two-sided p-values <0.05 indicated statistical significance. Analyses were performed using SAS 9.4 (SAS Institute) and Microsoft Excel 2013 (Microsoft). All data used is publicly available. In accordance with institutional regulations when dealing with publicly available data, informed consent was not necessary.

RESULTS

Our cohort included a total of 15,980 urologists, among these 13.6% were woman and 86.4% were man (Table 1). Most

Table 1. A comparison of general payments for 15,980 urologists stratified by gender from 2015–2021

	Woman (n=2,173)	Man (n=13,807)	Total (n=15,980)	p-value
Any payments from 2015–2021				<0.0001[a]*
No payments received	426 (19.6)	1,897 (13.7)	2,323 (14.5)	
At least one payment received	1,747 (80.4)	11,910 (86.3)	13,657 (85.5)	
Total number of payments (2015–2021)				<0.0001[b]*
N (missing)	2,173 (0)	13,807 (0)	15,980 (0)	
Median (IQR)	6.0 (1.0–43.0)	25.0 (2.0–127.0)	21.0 (2.0–115.0)	
Total payment amount (2015–2021) (USD)	10,205,565	210,889,557	221,095,122	
Sum of payments (2015–2021)				<0.0001[b]*
N (missing)	2,173 (0)	13,807 (0)	15,980 (0)	
Median (IQR) (USD)	300.1 (17.7–2,402.4)	1,194.5 (100.0–4,936.1)	1,017.4 (81.9–4,632.1)	
Top half				<0.0001[a]*
<Median sum of payments	1,374 (63.2)	6,608 (47.9)	7,982 (49.9)	
≥Median sum of payments	799 (36.8)	7,199 (52.1)	7,998 (50.1)	
Degree type				<0.0001[a]*
D.O.	122 (6.2)	482 (3.6)	604 (3.9)	
M.D.	1,854 (93.8)	13,062 (96.4)	14,916 (96.1)	
Missing	197	263	460	
Years from graduation to 2021				<0.0001[b]*
N (missing)	1,180 (993)	8,353 (5,454)	9,533 (6,447)	
Median (IQR)	13.0 (8.0–20.0)	24.0 (13.0–34.0)	22.0 (12.0–33.0)	
AUA section				<0.0001[a]*
Mid-Atlantic	210 (12.0)	1,191 (10.0)	1,401 (10.3)	
New England	99 (5.7)	583 (4.9)	682 (5.0)	
New York	97 (5.6)	954 (8.0)	1,051 (7.7)	
North Central	355 (20.3)	2,084 (17.5)	2,439 (17.9)	
Northeastern	53 (3.0)	423 (3.6)	476 (3.5)	
South Central	234 (13.4)	1,645 (13.8)	1,879 (13.8)	
Southeastern	317 (18.2)	2,828 (23.8)	3,145 (23.0)	
Western	380 (21.8)	2,192 (18.4)	2,572 (18.8)	
Missing	428	1,907	2,335	

Values are presented as number (%), number (missing), median (IQR), or number only.
IQR, interquartile range; USD, US dollar; D.O., doctor of osteopathic medicine; M.D., doctor of medicine; AUA, American Urological Association.
[a]:Statistics by chi-square test.
[b]:Statistics by Kruskal–Wallis test.
*p<0.05.

Table 2. Multivariate logistic regression for 14,941 urologists receiving total payments in the top half of all urologists from 2015–2021

Covariate	Level	Top half of sum of payments		
		OR (95% CI)	OR p-value	Type 3 p-value
Gender	Woman	0.62 (0.54–0.72)	<0.001*	<0.001*
	Man	-	-	
Degree type	D.O.	1.77 (1.36–2.30)	<0.001*	<0.001*
	M.D.	-	-	
Years from graduation to 2021		1.01 (1.01–1.02)	<0.001*	
AUA section	Mid-Atlantic	1.27 (1.05–1.54)	0.013*	<0.001*
	New England	0.58 (0.47–0.72)	<0.001*	
	New York	0.91 (0.75–1.11)	0.377	
	North Central	0.89 (0.77–1.04)	0.148	
	Northeastern	0.82 (0.63–1.06)	0.136	
	South Central	1.52 (1.28–1.81)	<0.001*	
	Southeastern	1.62 (1.39–1.89)	<0.001*	
	Western	-	-	

Number of observations in the original data set=15,981. Number of observations used=8,980.
OR, odds ratio; CI, confidence interval; D.O., doctor of osteopathic medicine; M.D., doctor of medicine; AUA, American Urological Association.
*p<0.05.

urologists had an M.D. degree (96.1%), and the median years from graduation was 22.0 years. The median years from graduation was 13.0 (8.0–20.0) for woman urologists compared to 24.0 (13.0–34.0) for man urologists (p<0.0001). The total payment amount was $210,889,557 for man urologists and $10,205,565 woman urologists. Overall median sum of payments was $1,017.4, but was $1,194.5 for men and $300.1 for women when broken down by gender. Additionally, 63.2% of woman urologists were in the bottom half (<median) of sum of payments compared to 47.9% of man urologists (p<0.0001). On multivariable analysis (Table 2), after adjusting to all covariates woman urologists were less likely to be in the top half (≥median) of payments (odds ratio [OR] 0.62, 95% confidence interval [CI] 0.54–0.72, p<0.001) when compared to their man counterparts.

Our sub-cohort of academic urologists included a total of 2,400 urologists, among these 18.1% were woman and 81.9% were man (Table 3). Most urologists had an M.D. degree (96.9%), and the median years from graduation was 19 years. The median years from graduation was 13.0 (9.0–19.0) for woman urologists compared to 21.0 (13.0–32.0) for men (p<0.0001). Overall median sum of payments to a urologist was $1,229.0, but was $1,551.7 for man urologists and $481.3 for woman urologists when broken down by gender. Additionally, 62.2% of woman academic urologists were in the bottom half of sum of payments compared to 46.2% of man urologists (p<0.0001). Compared to their man counterparts, less woman urologists were in general urology (23.3% vs. 31.1%) and urologic oncology (9.9% vs. 26.2%) but more were in pediatrics (23.3% vs. 11.5%) and FPMRS/urogynecology (22.8% vs. 5.2%) (p<0.0001 for all). Less women also had the rank of professor (11.3% vs. 26.2%) and the chair position (2.3% vs. 6.5%) (p<0.0001 for both). On multivariable analysis (Table 4), woman academic urologists were less likely than man academic urologists to be in the top half of total payments received (OR 0.55, 95% CI 0.42–0.72, p<0.001).

DISCUSSION

This study aims to explore the gap in payments from industry between man and woman urologists from 2015 to 2021, which is the most current analysis of the payment gap. We found that man urologists received more per physician than woman urologists overall and in academics. Woman urologists were significantly less likely to be in the top half of payments received, and this difference was more pronounced for academic urologists. Even though woman urologists made up 10.9% of all practicing urologists in 2021, industry payments to woman urologists still lag behind [9]. Despite knowledge from previous studies, industry payment inequalities still persist. These results should urge the urology and industry communities to support their woman counterparts and strive to achieve comparable industry payments between man and woman urologists in the long term.

The inequality between man and woman urologists extends beyond industry payments, however. Other markers of career progression such as promotions, prestigious academic awards, authorship, and overall salary heavily favor man urologists. Based on 2017 AUA data, women in urology took 1.2 years longer than men in urology to be promoted from

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Table 3. A comparison of general payments for 2,400 academic urologists stratified by gender from 2015–2021

	Woman (n=434)	Man (n=1,966)	Total (n=2,400)	p-value
Any payments from 2015–2021				0.0059[a]*
No payments received	124 (28.6)	440 (22.4)	564 (23.5)	
At least one payment received	310 (71.4)	1,526 (77.6)	1,836 (76.5)	
Total number of payments (2015–2021)				<0.0001[b]*
N (missing)	434 (0)	1,966 (0)	2,400 (0)	
Median (IQR)	7.0 (0.0–33.0)	17.0 (2.0–80.0)	15.5 (1.0–67.0)	
Sum of payments by provider				<0.0001[b]*
N (missing)	434 (0)	1,966 (0)	2,400 (0)	
Median (IQR) (USD)	481.3 (37.7–2,451.6)	1,551.7 (119.3–6,921.4)	1,229.0 (93.1–6,111.8)	
Top half				<0.0001[a]*
<Median sum of payments	270 (62.2)	908 (46.2)	1,178 (49.1)	
≥Median sum of payments	164 (37.8)	1,058 (53.8)	1,222 (50.9)	
Degree type				0.1366[a]
D.O.	18 (4.2)	55 (2.8)	73 (3.1)	
M.D.	412 (95.8)	1,896 (97.2)	2,308 (96.9)	
Missing	4	15	19	
Years from graduation to 2021				<0.0001[b]*
N (missing)	360 (74)	1,738 (228)	2,098 (302)	
Median (IQR)	13.0 (9.0–19.0)	21.0 (13.0–32.0)	19.0 (12.0–30.0)	
Most recent AUA section				0.0072[a]*
Mid-Atlantic	38 (9.6)	203 (10.9)	241 (10.7)	
New England	36 (9.1)	136 (7.3)	172 (7.6)	
New York	41 (10.3)	282 (15.1)	323 (14.3)	
North Central	103 (25.9)	429 (23.0)	532 (23.5)	
Northeastern	15 (3.8)	80 (4.3)	95 (4.2)	
South Central	41 (10.3)	184 (9.9)	225 (10.0)	
Southeastern	50 (12.6)	310 (16.6)	360 (15.9)	
Western	73 (18.4)	239 (12.8)	312 (13.8)	
Missing	37	103	140	
Subspecialty				<0.0001[a]*
General	101 (23.3)	612 (31.1)	713 (29.7)	
Oncology	43 (9.9)	515 (26.2)	558 (23.3)	
Reconstructive surgery	32 (7.4)	100 (5.1)	132 (5.5)	
Endourology	28 (6.5)	215 (10.9)	243 (10.1)	
Pediatrics	101 (23.3)	226 (11.5)	327 (13.6)	
Andrology	23 (5.3)	133 (6.8)	156 (6.5)	
FPMRS/UroGyn	99 (22.8)	102 (5.2)	201 (8.4)	
Minimally invasive/robotic	6 (1.4)	42 (2.1)	48 (2.0)	
Transplant	1 (0.2)	21 (1.1)	22 (0.9)	
Rank				<0.0001[a]*
None	96 (22.1)	374 (19.0)	470 (19.6)	
Assistant professor	196 (45.2)	685 (34.8)	881 (36.7)	
Associate professor	92 (21.2)	362 (18.4)	454 (18.9)	
Professor	49 (11.3)	515 (26.2)	564 (23.5)	
Professor emeritus	1 (0.2)	30 (1.5)	31 (1.3)	

assistant to associate professor. Man urologists were also more likely to undergo "rapid promotion," defined as promotion in less than 4 years, to associate professor [4]. Wenzel et al. [5] demonstrated that awards given by the AUA were also skewed towards man urologists. Between 1963 and 2020, only 6.4% of award recipients were woman urologists. With-

Table 3. Continued

	Woman (n=434)	Man (n=1,966)	Total (n=2,400)	p-value
Position				0.0009[a]*
None	311 (71.7)	1,250 (63.6)	1,561 (65.0)	
Chair	10 (2.3)	128 (6.5)	138 (5.8)	
Vice-chair	11 (2.5)	69 (3.5)	80 (3.3)	
Chief	18 (4.1)	164 (8.3)	182 (7.6)	
PD	1 (0.2)	11 (0.6)	12 (0.5)	
Associate PD	10 (2.3)	34 (1.7)	44 (1.8)	
Assistant PD	0 (0.0)	4 (0.2)	4 (0.2)	
Hospital leadership	2 (0.5)	9 (0.5)	11 (0.5)	
Other/Misc. leadership	71 (16.4)	297 (15.1)	368 (15.3)	
Fellowship				0.0048[a]*
No	98 (22.6)	576 (29.3)	674 (28.1)	
Yes	336 (77.4)	1,390 (70.7)	1,726 (71.9)	
H-index				<0.0001[b]*
N (missing)	434 (0)	1,966 (0)	2,400 (0)	
Mean±SD	8.5±9.3	16.8±18.7	15.3±17.6	
Median (IQR)	6.0 (3.0–11.0)	11.0 (3.0–24.0)	9.0 (3.0–21.0)	
Publications				<0.0001[b]*
N (missing)	434 (0)	1,966 (0)	2,400 (0)	
Mean±SD	29.2±45.0	73.3±121.7	65.3±113.1	
Median (IQR)	14.0 (5.0–31.0)	31.0 (6.0–86.0)	25.0 (5.0–75.0)	

Values are presented as number (%), number (missing), median (IQR), number only, or mean±SD.
IQR, interquartile range; D.O., doctor of osteopathic medicine; M.D., doctor of medicine; AUA, American Urological Association; FPMRS/UroGyn, female pelvic medicine and reconstructive surgery/urogynecology; PD, program director; Misc., miscellaneous; SD, standard deviation.
[a]:Statistics by chi-square test.
[b]:Statistics by Kruskal–Wallis test.
*p<0.05.

in that group, women were more likely to receive less prestigious early-career awards (23.1%) than mid- (2.3%) to late-career (5.3%) awards, which are generally regarded as more esteemed [5]. The literature across the past few decades has also demonstrated an overall lower salary for woman versus man urologists [7].

There is no singular identifiable cause as to why woman urologists are paid disproportionately less by industry than their man counterparts. The reason is most likely multifactorial, with both institutional and personal biases against women playing a role. It might be argued that man patients, which is the majority of urology patients, may have a preference against woman urologists doing the physical exam. However, a survey in 1990 reported that almost half of the men surveyed had no gender preference for their urologist performing a physical exam [10]. This sentiment has changed in the last three decades; results from a recent survey in 2022 showed that patient gender, race, and religion do not appear to influence their preference of a man or woman urologist [11]. Another reason for this discrepancy is certainly a lack of woman urology mentors and representation in leadership positions, which may discourage younger woman urologists from pursuing industry relationships and more prestigious roles. For example, Harris et al. [12] demonstrated that of AUA speaking panels from 2017–2019, 59% were made up exclusively of man urologists and moderators. Several studies have also shown woman underrepresentation in faculty and editorial leadership positions [6,13]. In addition to this, the burdens related to family life and childbirth that women experience disproportionately more than men may make forming industry relationships difficult. Women often take medical leave for childbirth and commonly act as the primary caregiver for their children. An inability to travel from home due to these reasons may preclude women from securing certain speaker and consulting engagements which could improve their visibility to industry [14]. Another credible theory for this inequality suggests that industry relationships are more commonly seen with older, more seasoned physicians. This was also exhibited by our results where man urologists had longer median years from graduation (24 years vs. 13 years). However, our multivariable analysis demonstrated that even when adjusting for years from gradu-

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Table 4. Multivariate logistic regression for 2,400 academic urologists receiving total payments in the top half of all academic urologists from 2015–2021

Covariate	Level	Top half of total payments received		
		OR (95% CI)	OR p-value	Type 3 p-value
Gender	Woman	0.55 (0.42–0.72)	<0.001*	<0.001*
	Man	-	-	
Degree type	D.O.	2.36 (1.33–4.17)	0.003*	0.003*
	M.D.	-	-	
Years from graduation to 2021		1.00 (0.99–1.01)	0.360	0.360
Most recent AUA section	Mid-Atlantic	0.78 (0.53–1.15)	0.208	<0.001*
	New England	0.52 (0.34–0.79)	0.002*	
	New York	0.90 (0.63–1.30)	0.583	
	North Central	0.92 (0.66–1.26)	0.595	
	Northeastern	0.52 (0.30–0.88)	0.014*	
	South Central	1.52 (1.01–2.27)	0.044*	
	Southeastern	1.00 (0.70–1.43)	0.986	
	Western	-	-	
Subspecialty	Andrology	2.09 (0.76–5.72)	0.151	<0.001*
	Endourology	3.33 (1.24–8.95)	0.017*	
	FPMRS/UroGyn	4.12 (1.51–11.23)	0.006*	
	General	2.23 (0.72–6.92)	0.164	
	Minimally invasive/robotic	1.62 (0.51–5.10)	0.411	
	Oncology	1.77 (0.67–4.65)	0.248	
	Pediatrics	0.49 (0.18–1.37)	0.173	
	Reconstructive surgery	2.51 (0.90–6.99)	0.077	
	Transplant	-	-	
Rank	Assistant professor	1.59 (0.34–7.35)	0.554	0.463
	Associate professor	1.92 (0.42–8.82)	0.400	
	None	1.73 (0.37–8.02)	0.484	
	Professor	2.05 (0.46–9.06)	0.345	
	Professor emeritus	-	-	
Position	Assistant PD	1.34 (0.13–14.05)	0.810	0.346
	Associate PD	0.70 (0.29–1.65)	0.413	
	Chair	1.29 (0.67–2.51)	0.445	
	Chief	0.65 (0.35–1.20)	0.168	
	Hospital leadership	1.04 (0.22–5.01)	0.959	
	None	0.91 (0.53–1.59)	0.751	
	Other/Misc. leadership	1.04 (0.58–1.85)	0.899	
	PD	1.58 (0.35–7.19)	0.553	
	Vice-chair	-	-	
Fellowship	No	1.04 (0.55–1.98)	0.907	0.907
	Yes	-	-	
H-index		1.01 (1.00–1.03)	0.086	0.086
Publications		1.00 (1.00–1.00)	0.449	0.449

Number of observations in the original data set=2,400. Number of observations used=1,999.
OR, odds ratio; CI, confidence interval; D.O., doctor of osteopathic medicine; M.D., doctor of medicine; AUA, American Urological Association; FPMRS/UroGyn, female pelvic medicine and reconstructive surgery/urogynecology; PD, program director; Misc., miscellaneous.
*p<0.05.

ation, the probability of being in the top half of payments was still significantly lower for woman urologists. While the percentage of women in urology has increased dramatically in recent years, the overwhelming population of woman urologists are young, newer doctors. As this new generation of urologists matures over the next few decades, it remains

to be seen whether a concurrent move towards equity ensues. Unfortunately, there is also inherent bias in society that favors men over women for more prestigious or senior positions [4]. While these reasons may all contribute to a discrepancy between man and woman urologists, it can also be hypothesized that this difference exists because women simply seek out industry relationships less frequently than men. Whether this is the case or not has not been studied, but it is important to note that if this were a contributing factor, a large part of the reason why this occurs is due to the reasons stated above: lack of representation, duties outside of work, and bias favoring men. The importance of having woman urology mentors to support and advocate for other woman urologists, therefore, cannot be understated.

Although this study was conducted with urologists in the United States, it is important to note that there are significant differences in healthcare provider payment systems across different countries due to differences in healthcare policies, insurance systems, reimbursement models, and cultural factors. A cross-sectional study of surgeons operating with a fee-for-service system in Canada showed a disparity between hourly earnings for woman surgeons compared to their man counterparts, even in a matched analysis; additionally, woman surgeons had significantly less years in practice and performed more procedures with lower physician reimbursement [15]. The payment cap still persisted in Canadian physicians when accounting for different specialties, practice settings, and payment models [16]. Other studies also show disparities in payments for woman physicians in the United Kingdom, Germany, France, Norway, Greece, Spain, Brazil, Mexico, Iran, and Japan [17,18]. Although the proportion of woman physicians in the workforce may differ across countries, there has still been an overall increase in woman physicians in the past few decades. This study is applicable beyond the United States as gender payment disparities have been reported across different healthcare systems in multiple countries.

There are a few limitations of this study. Suspected inaccuracies in OPP data secondary to incorrect reporting and exclusion of data by some medical centers may skew results. However, the database does not rely on physician recall for reporting and physicians can review and dispute inaccurate data prior to publication When looking at the difference between industry payments to all man and woman urologists, we were also unable to control for urologic subspecialty and age due to limitations in available variables in the OPP and NPI datasets. However, we included the variable "years from graduation to 2021" to serve as a marker for years of experience instead of age. Multivariable analysis added immense support to our theory and data. However, logistic regression could only be performed on those urologists who had information for all data points (i.e., subspecialty, position, rank, etc.). About 400 academic urologists (~17%) were therefore left out of logistic regression models. Additionally, information collected for this database was at the mercy of each university's webpage and how recently it was updated.

CONCLUSIONS

This study aims to highlight the discrepancies in industry payments between man and woman urologists. However, we are unable to draw definitive conclusions as to why this occurs. Future areas of study should investigate the reasons why women in urology are not only less involved with industry, but also paid disproportionately less than their man counterparts. Additional thought should be given as to how urology programs can improve woman visibility, support, and involvement with industry. Industry relationships should continue to be viewed with scrutiny and evaluated for areas where woman urologists' relationships can be improved. Ultimately, the onus lies both on current urologists and industry to support and advocate for their woman colleagues, which will not only enhance the lives of woman urologists but also diversify and progress urology as a whole.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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AUTHORS' CONTRIBUTIONS

Research conception and design: Matthew James Davis, Samantha Raffee, and Firas Abdollah. Data acquisition: Matthew James Davis, Alexandra Rogers, Jonathan Rexroth, Taylor Jane Malchow, Mohit Butaney, and Samantha Wilder. Statistical analysis: Alex Stephens. Data analysis and interpretation: Yuzhi Wang, Matthew James Davis, and Alex Stephens. Drafting of the manuscript: Yuzhi Wang, Matthew James Davis, and Alexandra Rogers. Critical revision of the manuscript: Yuzhi Wang, Matthew James Davis, Firas Abdollah, and Samantha Raffee. Obtaining funding: Firas Abdollah. Administrative, technical, or material sup-

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