

RESEARCH LETTER

Female Presidents in American Gastroenterology Societies: An Upward Trend



In 2019, less than 19% of practicing gastroenterologists self-identified as female, while 36% of the overall physician workforce identified as female.¹ Historically, gastroenterology has been ranked among the lowest for female physician specialty choice.² Although gender-specific factors influencing the desire to pursue the gastroenterology and additional fellowship training have been explored, the representation of females in leadership roles has not been examined extensively. This study's purpose was to analyze trends in the presidential role within prominent gastroenterology and hepatology societies over time, and with interest to ascertain whether there has been increasing female representation in the presidential role of these societies.

This cross-sectional study was exempted from institutional review board approval. Presidents of 8 prominent gastroenterology and hepatology organizations (Table A1) were identified using publicly available data from organization websites and administrative contacts within the societies. Demographics and academic metric data of each unique president were analyzed spanning the years 2000–2021. To avoid data duplication, candidates who served consecutive years were counted once within each organization. H-index values, a measurement of the volume and impact of an individual's research output,³ were collected via the Scopus database to quantify research productivity.

The collected data were analyzed first overall, then according to gender. Frequencies and percentages were used to demonstrate categorical variables, while continuous variables were

displayed using the median interquartile range. Differences between genders were tested using chi-square tests for categorical variables and *t*-tests for continuous variables. Nonparametric alternatives were utilized when appropriate ($P \leq .05$) for all analyses.

Over the 22 years (2000–2021), 151 unique presidents were identified. Male presidents constituted 86.1% of the total, while female presidents constituted 13.9% of the total. Societal presidents most commonly previously attended the following medical schools: Duke University School of Medicine (SOM), Yale SOM, and Johns Hopkins SOM; the following residency programs: Mayo Clinic College of Medicine and Science, Johns Hopkins SOM, and the University of California, Los Angeles; and the following fellowship programs: Mayo Clinic College of Medicine and Science, Harvard Medical School, and the Cleveland Clinic Foundation. There were no statistically significant gender-specific differences in the H-index, academic rank, additional leadership positions, and time in practice to leadership. Female gastroenterologists had significantly more board certifications than male gastroenterologists ($P = .0063$) (Table).

For the years 2000–2021, Figure A represents the first-time female presidents of each organization, and Figure B represents the first-time and continuing female presidents of each organization. Males comprised 100% of societal presidents across all societies for 9 (40.9%) independent years. Within this timeframe, 2017 was the only year in which female presidents outnumbered male presidents, representing 66.7% and 33.3% of the total, respectively. However, there was a statistically significant increase in the number of females elected to the presidency for the first time as demonstrated by the Cochran-Armitage trend test ($P = .0136$) as well as the total percentage of female presidents, both first-time and continuing ($P = .0082$).

Over the past 2 decades, the landscape of leadership has changed in the fields of gastroenterology and hepatology. There has been a greater focus on inclusion and equity in academic medicine; which our study supports, noting an upward trend in the number of females elected to societal presidency. Despite the lesser proportion of practicing female gastroenterologists, the increasing proportion of females in presidency positions is encouraging. Female presidents had equivalent qualifications in most metrics identified, and notably had additional board certifications when compared to their male counterparts. This may reflect the documented trend in which females feel the need to achieve more in order to advance compared to their male counterparts.⁴

Despite improvements in leadership opportunities, a gender gap persists in the specialty. The lack of female representation is multifactorial and may include both structural and unconscious biases that influence the workforce dynamic.⁵ Recent investigations have suggested that the lack of female visibility as mentors and leaders negatively impacts female trainees' attraction to academia. One study concluded that although there has been a trend toward more equal gender representation within trainees, females remain underrepresented among program directors, division and department chairs, and other faculty.⁶ Additionally, unequal familial and domestic duties have been thought to affect the pursuit of additional postgraduate training including fellowship training. There are also systemic gender biases that can affect grant opportunities, directly impacting female leadership roles and career advancement.^{5,7}

Nonetheless, the increase in female presidents may reflect the steady growth in the number of actively practicing female gastroenterologists due to institutional efforts to alleviate gender bias and increase women representation.^{5,8} Notably, less than 19%

Table. Presidents of Gastroenterology Societies Stratified by Gender

Characteristics of presidents	Gender		Total (N = 151)	P value ^a
	F (N = 21)	M (N = 130)		
H index, median (IQR)	42.0 (33.0, 64.0)	49.5 (34.0, 70.0)	49.0 (34.0, 70.0)	.4929 ^c
Years in practice at first leadership election, median (IQR)	29.0 (27.0, 35.0)	32.0 (28.0, 35.0)	32.0 (28.0, 35.0)	.3285 ^d
Holds a leadership position within an academic institution, n (%)				.3498 ^e
No	10 (47.6%)	48 (36.9%)	58 (38.4%)	
Yes	11 (52.4%)	82 (63.1%)	93 (61.6%)	
Academic rank, n (%)				.8353 ^f
No formal academic rank	3 (14.3%)	13 (10.0%)	16 (10.6%)	
Assistant professor	1 (4.8%)	5 (3.8%)	6 (4.0%)	
Associate professor	1 (4.8%)	8 (6.2%)	9 (6.0%)	
Full, emeritus, clinical professor	16 (76.2%)	104 (80.0%)	120 (79.5%)	
Number of board certifications, n (%)				.0063 ^f
1	3 (14.3%)	23 (17.7%)	26 (17.2%)	
2	14 (66.7%)	105 (80.8%)	119 (78.8%)	
3	4 (19.0%)	2 (1.5%)	6 (4.0%)	
Number of residencies completed, n (%)				1.0000 ^f
0	0 (0.0%)	1 (0.8%)	1 (0.7%)	
1	21 (100.0%)	128 (98.5%)	149 (98.7%)	
2	0 (0.0%)	1 (0.8%)	1 (0.7%)	
Number of fellowships completed, n (%)				.3818 ^f
1	16 (84.2%)	114 (91.9%)	130 (90.9%)	
2	3 (15.8%)	10 (8.1%)	13 (9.1%)	
Number of advanced degrees obtained ^b , n (%)				1.0000 ^f
0	19 (90.5%)	114 (87.7%)	133 (88.1%)	
1	2 (9.5%)	15 (11.5%)	17 (11.3%)	
2	0 (0.0%)	1 (0.8%)	1 (0.7%)	

IQR, interquartile range.

^aStatistical significance was set at P value less than .05.

^bAdvanced degrees: PhD, MPH, MBA, or JD.

^cWilcoxon rank sum P value.

^dUnequal variance 2 sample t-test.

^eChi-square P value.

^fFisher exact P value.

of the current gastroenterology workforce identify as female, while 31% of all gastroenterology resident trainees identify as female, suggesting a future advancement in the proportion of female physicians in the field.^{1,6,9}

As the field of gastroenterology evolves, it is important to continually mitigate barriers to female pursuit of leadership positions, beginning with early advocacy for female trainees. Recognition and mentoring of trainees along with sponsorship opportunities for females can increase opportunities for identifying future career pathways. Also increasing structural support of familial duties should allow female residents to consider the reality of additional training. Specifically, within gastroenterology and hepatology societies, the focus should remain on career advancement workshops, role

modeling, and mentoring to diminish barriers that may hinder the pursuit of advancement.^{2,10}

Limitations of this study include small sample size, potential gender misidentification, and limited generalizability to encompass all forms of leadership given that data were obtained only for presidents of each organization, and therefore did not include other executive office positions. Our study demonstrates an increase in female representation within the leadership of gastroenterology organizations between the years 2000–2021. While this increase in female representation in leadership is promising, it is important to continually support females pursuing both the specialty and leadership positions within the field of gastroenterology. Acknowledging the impact females have as leaders in

medicine and science is fundamental to achieving diversity, inclusion, and equal opportunities. Future studies should focus on the specific factors that lead to disparities that can be eliminated in order to ameliorate the gender gap.

*M. R. MANSOUR*¹

*E. J. DENHA*²

*A. M. RIDA*¹

*T. D. MERAM*¹

*Y. ABUSHUKUR*¹

*R. J. SALGIA*³

¹Department of Medical Education, Oakland University William Beaumont School of Medicine, Rochester, Michigan

²Department of Internal Medicine, Henry Ford Hospital, Detroit, Michigan

³Division of Gastroenterology and Hepatology, Henry Ford Hospital, Detroit, Michigan

Correspondence:

Address correspondence to: Meghan Mansour, BS, Oakland University William Beaumont School of Medicine, 586 Pioneer Dr., Rochester Hills, Michigan 48309. e-mail: meghanmansour@oakland.edu.

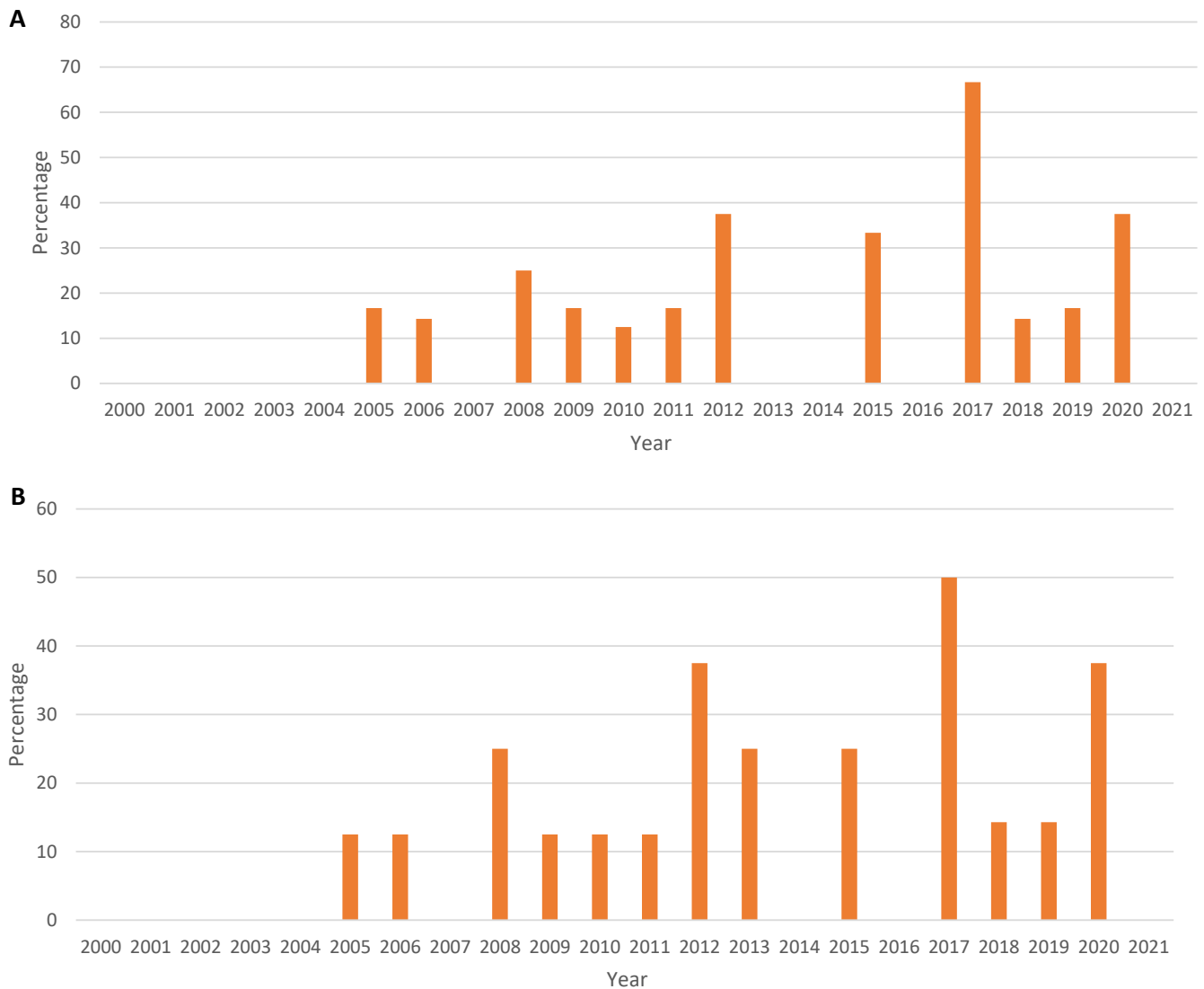


Figure. A: First-time female presidents of each organization from 2000 to 2021. B: First-time and continuing female presidents of each organization from 2000 to 2021.

Supplementary Materials

Material associated with this article can be found in the online version at <https://doi.org/10.1016/j.gastha.2023.05.005>.

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The corresponding author, on behalf of all authors, jointly and severally, certifies that their institution has approved the protocol for any investigation involving humans or animals and that all experimentation was conducted in con-

formity with ethical and humane principles of research.

Data Transparency Statement:

Data and analytic methods are made available throughout the manuscript; however, no specific study materials will be made available to other researchers.

Reporting Guidelines:

STROBE.