



# Advancing Research Dissemination & Gender Equity Through Social Media

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**June 19, 2019**



# Social Media & Me





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# Professional Use of Social Media

- **UNMC ID Division Blog & Social Media Platform**  
(<https://blog.unmc.edu/infectious-disease/>)
- **Provide Education for Professional Development**
- **Advance our knowledge through publications & research**

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JOURNAL OF WOMEN'S HEALTH  
Volume 00, Number 00, 2019  
© Mary Ann Liebert, Inc.  
DOI: 10.1089/jwh.2018.7515

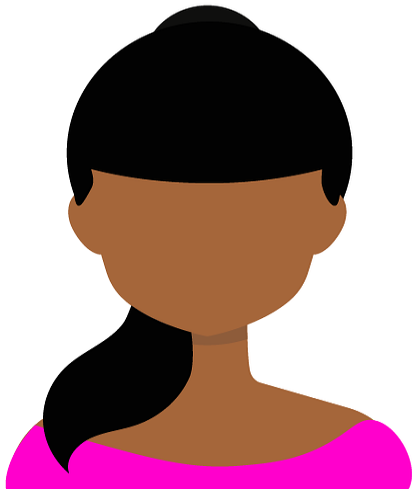


**Julie Silver, MD**

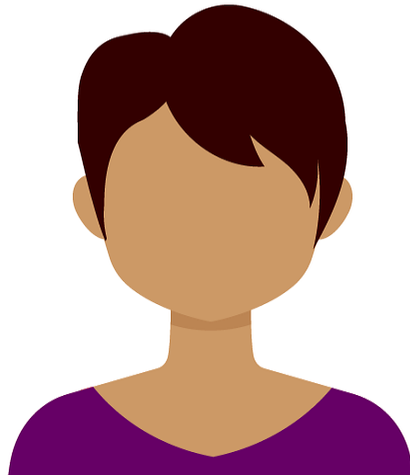
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## Use of a Coordinated Social Media Strategy to Improve Dissemination of Research and Collect Solutions Related to Workforce Gender Equity

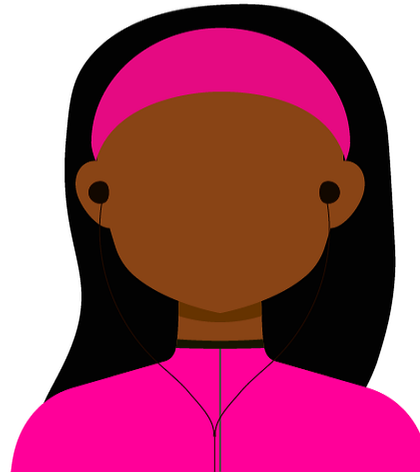
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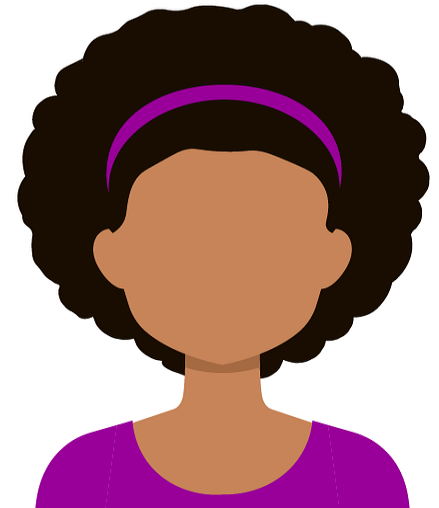
**There are many  
disparities affecting  
women in medicine.**



**This study aimed to  
assess if a social media  
strategy could be used to:**



**1 ) Increase  
dissemination of gender-  
equity related articles**



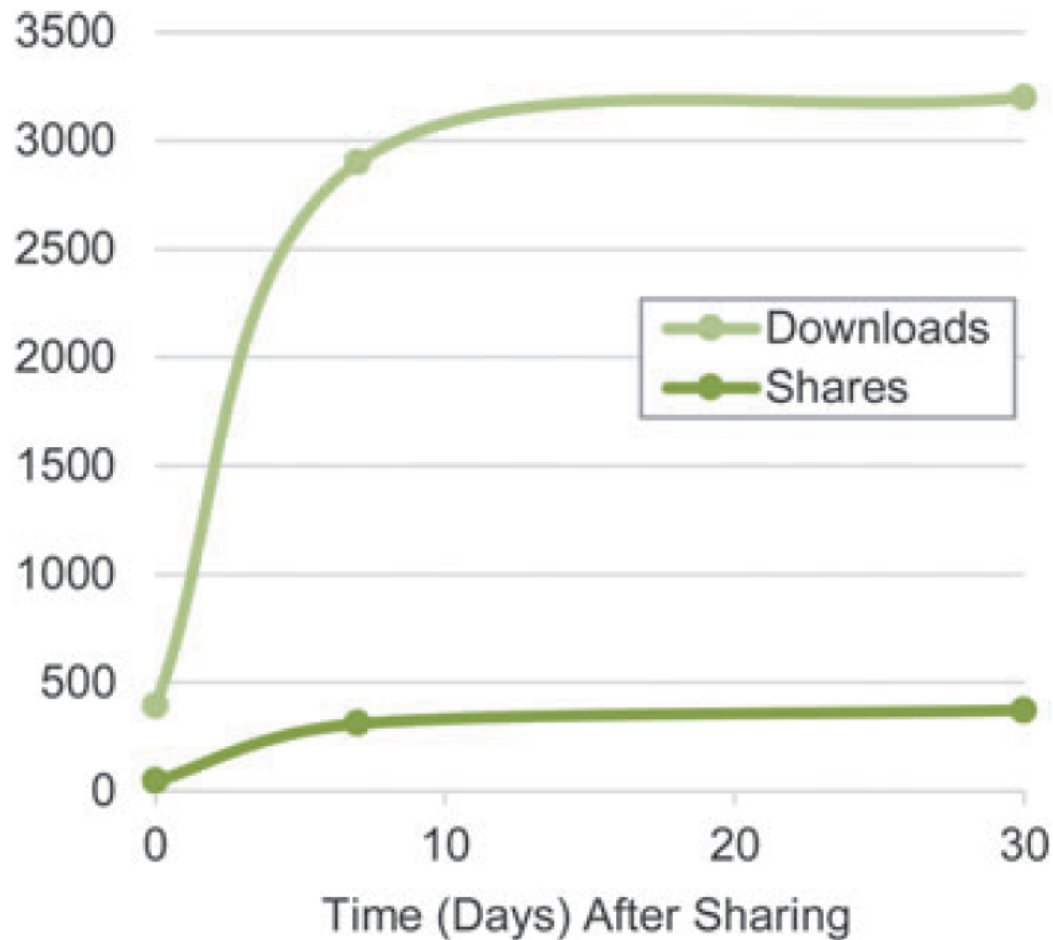
**2) Collect possible  
solutions for gender  
equity**

# Impact of Pregnancy and Gender on Internal Medicine Resident Evaluations: A Retrospective Cohort Study

Authors

[Authors and affiliations](#)

Megan L. Krause, Muhamad Y. Elrashidi, Andrew J. Halvorsen, Furman S. McDonald, Amy S. Oxentenko 





# Methods

- 8 published journal articles included in a 1-hour Twitter chat hosted by Physicians Weekly with guest co-host Dr. Silver (senior author)
- Data collection occurred before, during & after the chat
  - Altmetric
  - Twitter analytics
  - TweetReach (Union Metrics)
  - Qualitative data collected from participant responses



TABLE 1. PROFILE OF ARTICLES INCLUDED IN THE APRIL 10, 2018 PW WORKFORCE GENDER EQUITY CHAT

<i>Article title</i>	<i>Journal</i>	<i>Article nickname</i>	<i>First author</i>	<i>Online publication date, mm/dd/yyyy</i>	<i>Print publication date, mm/yyyy</i>	<i>Order of inclusion in PW Chat</i>
Current status of gender and racial/ethnic disparities among academic emergency medicine physicians	<i>Acad Emerg Med</i>	Compensation	Madsen TE	08/05/2017	10/2017	1
Gender differences in academic medicine: retention, rank, and leadership comparisons from the national faculty survey	<i>Acad Med</i>	Promotion	Carr PL	01/30/2018	Not; as of 08/10/2018	2
Impact of pregnancy and gender on internal medicine resident evaluations: a retrospective cohort study	<i>J Gen Intern Med</i>	Pregnancy	Krause ML	02/13/2017	06/2017	3
Women physicians are underrepresented in recognition awards from the Association of Academic Physiatrists	<i>Am J Phys Med Rehabil</i>	Awards	Silver JK	06/09/2017	01/2018	4
Gender differences in attending physicians' feedback to residents: a qualitative analysis	<i>J Grad Med Educ</i>	Evaluation	Mueller AS	10/28/2017	10/2017	5
It is time for zero tolerance for sexual harassment in academic medicine	<i>Acad Med</i>	Me Too	Bates CK	11/09/17	02/2018	6
The relationship between perceived gender judgment and well-being among surgical residents	<i>Am J Surg</i>	Judged	Salles A	11/06/2017	02/2018	7
Where are the women? The underrepresentation of women physicians among recognition award recipients from medical specialty societies	<i>PM R</i>	Metrics	Silver JK	06/09/2017	08/2017	8

TABLE 2. SOURCES, NAMES, AND DEFINITIONS OF METRIC TERMS

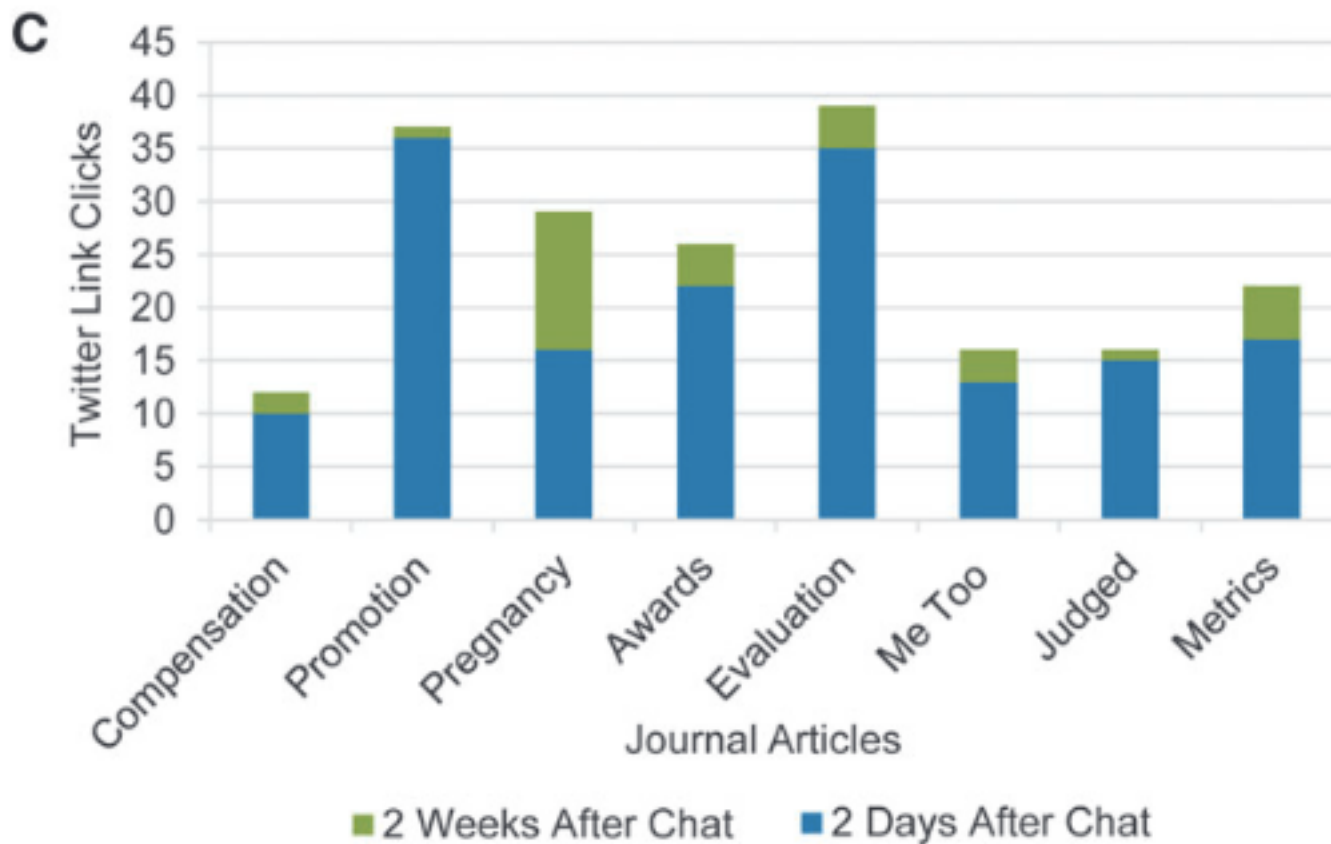
<i>Metric source and name</i>	<i>Metric definition</i>
Altmetric <sup>18,19</sup>	
Attention score	“Automatically calculated, weighted count of all of the attention a research output has received” across postpublication peer review, social media, mainstream media, and other sources
Rank	Rank by attention score when compared with similar articles by publication time, title, or journal of publication
Summary counts	Counts of how many authors from each source type (Twitter, Mendeley, Blogs, etc.) have mentioned or shared the article
Twitter <sup>20,21</sup>	
Impressions	Potential views, number of tweets multiplied by number of followers
Engagements	Number of times a user interacted with the tweet
Link Clicks	Number of clicks on a URL or card in the tweet
Likes	Number of clicks on the heart icon associated with the tweet, indicative of appreciation for the tweet
Retweets	Number of times an existing tweet was shared publicly by followers

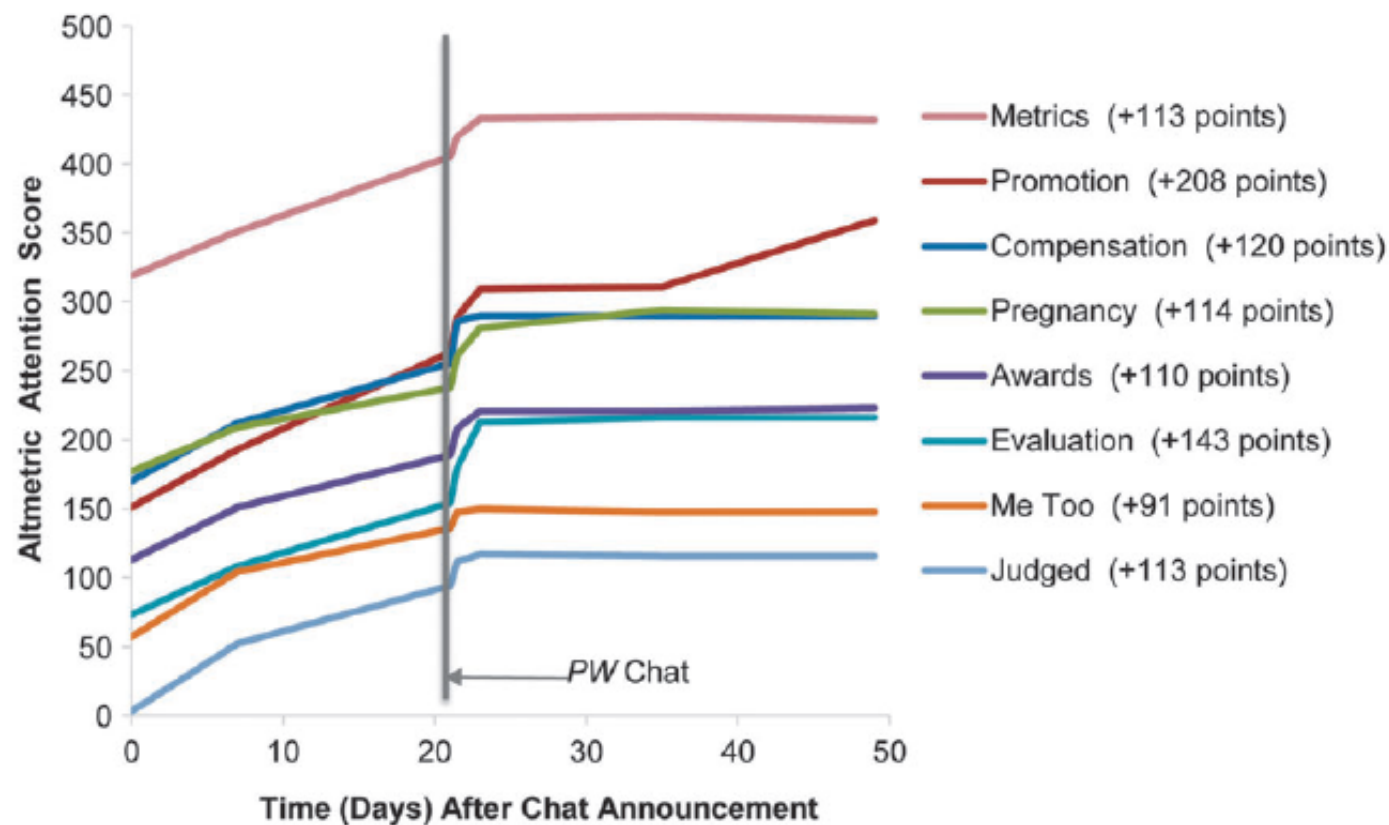


**294 Participants**  
**1500 Tweets**  
**8.6 Million Impressions**  
**181 Potential Solutions**

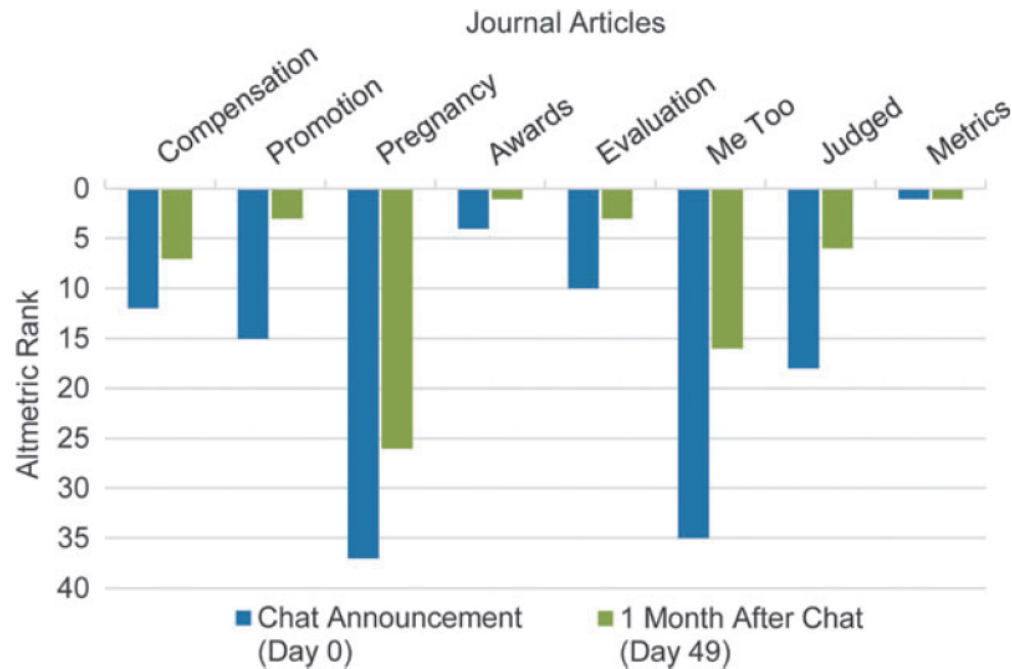
TABLE 4. CHAT QUESTION-RELATED TWEET ACTIVITY

<i>Question # and article</i>	<i>Question likes, No.</i>	<i>Question retweets, No.</i>	<i>Direct answers, No.</i>	<i>Answer likes, No.</i>	<i>Answer retweets, No.</i>
1 Compensation	24	12	24	252	96
2 Promotion	32	17	25	313	131
3 Pregnancy	23	7	34	419	153
4 Awards	26	20	28	263	106
5 Evaluation	25	11	22	168	49
6 Me Too	10	6	20	74	15
7 Judged	22	8	17	168	75
8 Metrics	33	16	11	74	31
Total	195	97	181	1731	656





**FIG. 2.** Impact of a coordinated chat strategy on article Altmetric Attention Score. Altmetric Attention Scores are shown for the eight selected articles at the time of announcement of the upcoming chat (Day 0), before the chat (Days 1–20) and following the chat (Days 21–49). Improvement in Altmetric Attention Score between chat announcement (Day 0) and 1 month after the chat (Day 49) is shown in *parentheses* behind each article nickname.



**FIG. 3.** Impact of a coordinated chat strategy on article Altmetric Rank. Because Altmetric Rank decreases as an article receives more attention (*e.g.*, moves from a #10 to a #1 rank) and to visually represent improvement in rank, the vertical axis in this chart was reversed. The Altmetric rank improved for seven of the eight articles between announcement of the chat (Day 0) and 1 month after the chat (Day 49). The improvement seen in the ranks of the MeToo and Judged articles is conservative as these articles were unranked on the day the chat was announced. For these articles, the Altmetric Ranks on Day 7 were substituted for the ranks on Day 0. Although the Metrics article showed the least improvement in rank during the study period, it could not have improved, holding and retaining the #1 rank from chat announcement through the end of the study period.

TABLE 3. IMPACT OF A COORDINATED CHAT STRATEGY ON ARTICLE M

	<i>Altmetric attention score</i>			<i>Altmetric rank in respective journal*</i>			<i>Art</i>	
	<i>Day 0</i>	<i>Day 49</i>	<i>Improvement</i>	<i>Day 0</i>	<i>Day 49</i>	<i>Improvement</i>	<i>Day 0</i>	<i>Day</i>
Compensation	170	290	120 (70.6%)	12	7	5 (41.7%)	373	795
Promotion	151	359	208 (137.7%)	15	3	12 (80%)		
Pregnancy	177	291	114 (64.4%)	37	26	11 (29.7%)		
Awards	113	223	110 (97.3%)	4	1	3 (75.0%)		
Evaluation	73	216	143 (195.9%)	10	3	7 (70.0%)		
Me Too	57	148	91 (159.6%)	35	16	≥19 (54.3%)		
Judged	3	116	113 (3766.7%)	18	6	≥12 (66.7%)		
Metrics	319	432	113 (35.4%)	1	1	0 (0%)		
Average improvement			126.5 (566.0%)			8.6 (52.2%)		
Sample standard deviation			35.9			6.1		
p-value			<0.0001			0.005		
95% CI for mean			50.5–136.5			5.5–13.7		

**Statistically Significant  
Improvement**

TABLE 6. ABBREVIATED WORKFORCE GENDER EQUITY SOLUTIONS PROPOSED BY CHAT PARTICIPANTS

Q1: What do you think can be done to close the wage gap?

- Assessment and transparent reporting of salary and benefits
- Teach negotiation skills
- *Standardize contracts, salaries, and bonuses*
- *Mentorship to increase promotion*
- *Assessment of bias in recruitment and promotion processes*
- Involve Human Resources to ensure equitable offers based on position/seniority
- *Flexibility in schedules*
- Subsidized child care
- *Parental leave for men and women*
- Data-driven engagement of leadership for change

Q2: The authors [of the Promotion article] recommended that institutions examine the climate for women to ensure their academic capital is fully utilized and equal opportunity exists for leadership. What do you think deans/chairs and other leaders should be doing if women's qualifications are similar, but they still are not advancing equitably?

- *Revise promotion and tenure processes to mitigate bias and equitably weight criteria*
- *Improve mentorship and sponsorship, with training*
- Root cause analysis of inequities
- *Implicit bias training*
- Assess workplace culture
- *Promote support and salary equity*
- Institutional committee(s) should report on processes and equity
- Require data on advancement selection decision-making and assess for bias within committees
- Annual evaluations with leadership to determine barriers to advancement
- Blind gender in review processes
- Redefine "early career"
- Leadership and career training for women



TABLE 5. MOST POPULAR WORKFORCE GENDER EQUITY SOLUTIONS PROPOSED BY CHAT PARTICIPANTS

<i>Question # and article</i>	<i>Question</i>	<i>Most popular solution proposed</i>	<i>Likes, No.</i>
1 Compensation	What do you think can be done to close the wage gap?	Transparency is one of the most important initiatives to address the gap. Understanding the salaries of others provides a foundation to negotiate and/or advocate for yourself or others.	23
2 Promotion	The authors recommended that institutions examine the climate for women to ensure their academic capital is fully utilized and equal opportunity exists for leadership. What do you think deans/chairs and other leaders should be doing if women's qualifications are similar, but they still are not advancing equitably?	The sponsorship of women by both women and men is essential. It should no longer be considered an 'honor' to serve as the only woman in a specific leadership role.	30
3 Pregnancy	What do you think medical education leaders should do to optimize training throughout pregnancy and prevent low peer evaluation scores for women?	Pregnancy and parenthood must be recognized as an expected part of life rather than an inconvenience to peers and employers. Parental leave support can assist this culture change.	74
4 Awards	What do you think medical society leaders should do to ensure that women members are equitably recognized for their important contributions?	Women should celebrate other women through award nominations.  Societies should ensure equity in their leadership in support of diversity of awardees. If diverse candidates are not available, the society should request nomination of women and other underrepresented groups.	27 each
5 Evaluation	What do you think medical education leaders should do to ensure that women are given consistent and constructive feedback during training?	Providing feedback to minimize the influence of gender bias requires consideration of two questions: (1) How would the feedback sound if given to the opposite gender? If the answer is not appropriate, then do not give it. (2) Is the feedback strictly related to work performance? If not, adjust the feedback.	25
6 Me Too	Q6: What do you think leaders at medical societies should be doing to ensure that women are safe from sexual harassment at conferences?	When you encounter articles or arguments regarding how women physicians are a cause of the physician shortage based on work load or leaving medicine, or those that suggest women should choose a different subspecialty, take an active role in combating these inaccuracies through verbal communication and/or writing. Consider engaging a more senior woman in the process.	15
7 Judged	There is a body of literature—in medicine and beyond—supporting that women are often judged worse than men when their gender is known, but not when their gender is disguised. So what should medical education leaders do to decrease gender-based judgment?	Provide all educators and trainees training on implicit bias and stereotype threat to increase understanding and recognition.	19
8 Metrics	How can we get our professional societies to examine inclusion data for women members and address gaps expeditiously?	Provide a specific path forward with a published process to achieve gender in medical societies as reflected in the journal article mentioned in question 8.	11

The most popular solution proposed by chat participants for each article question was that which accumulated the most number of likes. Does not include posts that did not offer a solution. Edited for length.



# Key Take-Home Points:



Successful Strategy for Research Dissemination as per Altmetrics Attention Score & Rank



Nearly 200 potential solutions focused on gender equity



Actionable items & initiatives to advance gender equity



Demonstrated that multiple issues may be addressed with similar measures (e.g. implicit bias training, mentorship/sponsorship)

# Questions?

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