



# Gender Inequity in Academic Medicine: The Current State

**Arwa Shana'ah, MD**

*Associate Professor, Clinical*

*Vice Chair of Diversity, Equity and Inclusion*

*Director of Pathology Residency Program*

*Director of Hematopathology Division*

*The Ohio State University Wexner Medical Center*

**MedNet21**  
Center for Continuing Medical Education

 **THE OHIO STATE UNIVERSITY**  
WEXNER MEDICAL CENTER

## Goals and objectives

At the end of this talk, participants will be able to:

- Recognize the status of gender inequity in pay, leadership and research
- Understand some of the contributing factors to the equity gap
- Identify some of the challenges women face in academic medicine
- Realize the impact COVID19 pandemic had on women in academic medicine

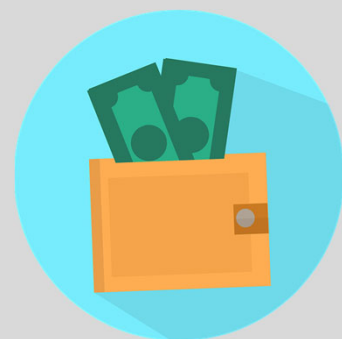
## Outline

- Historic perspective
- Gender inequity in pay, leadership and research
- Possible contributing factors
- Challenges facing women in medicine
- Moving forward



## Historic perspective

- Women first started joining the medical profession only in the 1840s when Elizabeth Blackwell, MD became the first female physician to obtain a medical degree in the United States
- As wage-labor became increasingly formalized during the [Industrial Revolution](#), women were often paid less than their male counterparts for the same labor.
- Equal Pay Act of 1963
- Lilly Ledbetter Fair Pay Act of 2009
- Title VII of the Civil Rights Act of 1964
- Title IX of the Education Amendments of 1972



**Equal Pay**

## Some progress

- More than half of medical students are female
- Women are approximately 46% of physicians in training
- Women comprise more than one third of the active physician workforce



Author: Mona Hassan Abo-Abda (CC BY-SA 4.0)

## Gender Inequity in Academic Medicine

- Pay equity gap
- Research equity gap
- Leadership equity gap



## Pay Equity Gap

- Sex Differences in Physician Salary in US Public Medical Schools exist even after accounting for age, experience, specialty, faculty rank, and measures of research productivity and clinical revenue
- Salary gap between male and female physicians adds up to \$2 million in lifetime earnings: Women may now equal or outnumber men in medical school classes, but their lifetime earnings as doctors still fall far short of parity. A persistent 25% pay gap between female and male physicians adds up to \$2 million over a medical career

## Pay Equity Gap

- The AAMC has issued a new assessment of salary disparities among U.S. physicians according to gender, race, and their intersection that reaffirms a persistent gender pay gap. As compared with male physicians in their own racial or ethnic groups, White women earn 77 cents on the dollar, Black women 79 cents, and Asian women 75 cents.
- There are ongoing challenges specific to the women who make up more than a third of the physician workforce. Women are paid 15-20% less than men and in the medical field, close to 30% less. Data from within academic medicine also shows particularly large gaps for women of color. At every rank, there are gender gaps in pay. In the past, when women were in the minority in the medical field, the gap was explained away by pipeline issues – women just hadn't been at the table long enough. Now, with women comprising over half of all medical school classes, salaries should be well along the way to parity.

## Pay Gap Across Specialties

- Doximity in 2021: pay gap of 24-30% across different specialties including surgical and non-surgical
- Overall, the starting salary for women was a median of \$26,800 lower than the starting salary for men. Women had a lower starting salary across 42 of the 45 subspecialties evaluated (93%).
- Year-10 salaries were lower for women in 43 of the 45 subspecialties (96%). The largest pay disparity after 10 years was in adult neurosurgery

### Average Annual Income – Male vs. Female

Male	Family Medicine	\$243,000
Female	Family Medicine	\$164,000
Male	Internal Medicine	\$275,000
Female	Internal Medicine	\$202,000
Male	Psychiatry	\$270,000
Female	Psychiatry	\$200,000

### Average Income – Male vs. Female Physicians Working 41 Hours as Week or More

Male	Family Medicine	\$254,000
Female	Family Medicine	\$187,000
Male	Internal Medicine	\$287,000
Female	Internal Medicine	\$209,000
Male	Psychiatry	\$276,000
Female	Psychiatry	\$210,000

Source: 2018 study by Vox

**Specialty gap: Women's pay fell short of men's in 2018**

<b>Largest gaps</b>	Pediatric pulmonology	23%
	Otolaryngology	22%
	Urology	22%
	Radiology	21%
	Pediatrics	20%

**Specialty gap: Women's pay fell short of men's in 2018**

<b>Smallest gaps</b>	Hematology	4%
	Rheumatology	8%
	Radiation oncology	9%
	Thoracic surgery	11%
	Plastic surgery	11%

Note: Compensation surveys were completed by approximately 90,000 physicians

Source: Doximity

## Pay Equity Gap: Contributing Factors

Myriad factors contribute to pay inequity in medicine. While some of these are broader issues of gender inequity, other factors may also play a role:

- Women may find more career opportunities in lower-paying specialties.
- Women are also more likely to prioritize flexible schedules over higher pay.
- Many women may cut down on work hours once they have children.
- Women tend not to self-promote or negotiate salary.

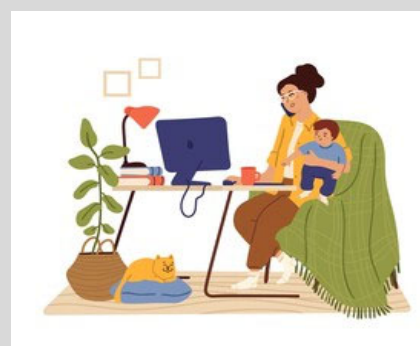
### Top Workplace Concerns

Male	Work-life balance	36%
Female	Work-life balance	35%
Male	COVID-19 workload or safety concerns	19%
Female	COVID-19 workload or safety concerns	13%
Male	Salary/earnings	14%
Female	Salary/earnings	9%
Male	Career Development	8%
Female	Career Development	9%
Male	Relationships with colleagues, staff	8%
Female	Relationships with colleagues	6%
Male	Combining working and parenting	4%
Female	Combining working and parenting	14%
Male	Age discrimination	3%
Female	Age discrimination	2%
Male	Gender equality/divide	1%
Female	Gender equality/divide	4%
Male	Sexual harassment at work	0%
Female	Sexual harassment at work	0%
Male	Other	8%
Female	Other	8%

Source: Medscape

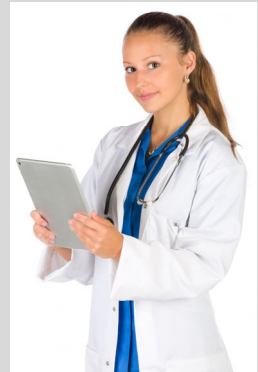
## Pay Equity Gap: “Motherhood” Penalty

- A recent National Bureau of Economics working paper shows that while women have made significant gains towards wage equity in the past several decades, “most of the remaining gender inequality in earnings is due to children.”
- Studies of physicians have shown that women with children work on average 10 fewer hours per week compared with women physicians without children and among male and female physician scientists, women physician parents spend 8.5 more hours per week on domestic tasks.-
- Additionally, economist Claudia Goldin has shown that “even when mothers cut back at work, they are not paid proportionately less ... they are still paid less than men for the hours they work.”
- Women who become mothers are often discriminated against, recommended for lower starting salaries, seen as less competent, and passed over for promotions based on the assumption that they do not want a more senior role if they have young children at home.



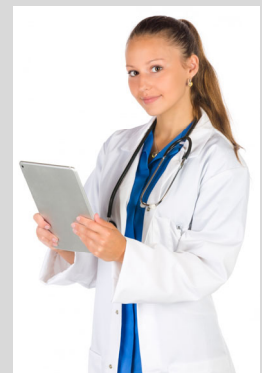
## Research Equity Gap

- Women physicians assume more domestic responsibilities compared with their male counterparts, which may take away time from clinical duties, grant applications, manuscript preparation, and opportunities for networking and professional development
- Women receive less research funding and would benefit from blinded research review and career flexibility. Women primary and senior authors were less likely to be cited.



## Research Equity Gap

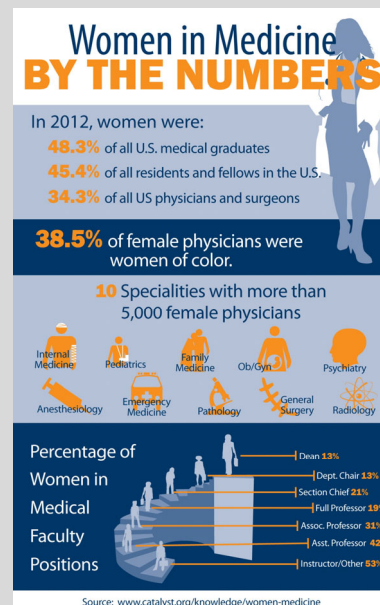
- Women are less likely to be published in high-impact journals, and they are less likely to have their research cited by others. Men get more funding for grants, attract more trainees and are more productive. Women are less likely to be on guideline panels
- A study in JAMA in 2015 found that only 36% of the primary authors and 26% of the senior authors in the sample were female.
- Gender-based differences in article citations may be a key contributor to disparities in the advancement and promotion of women in academic medicine.



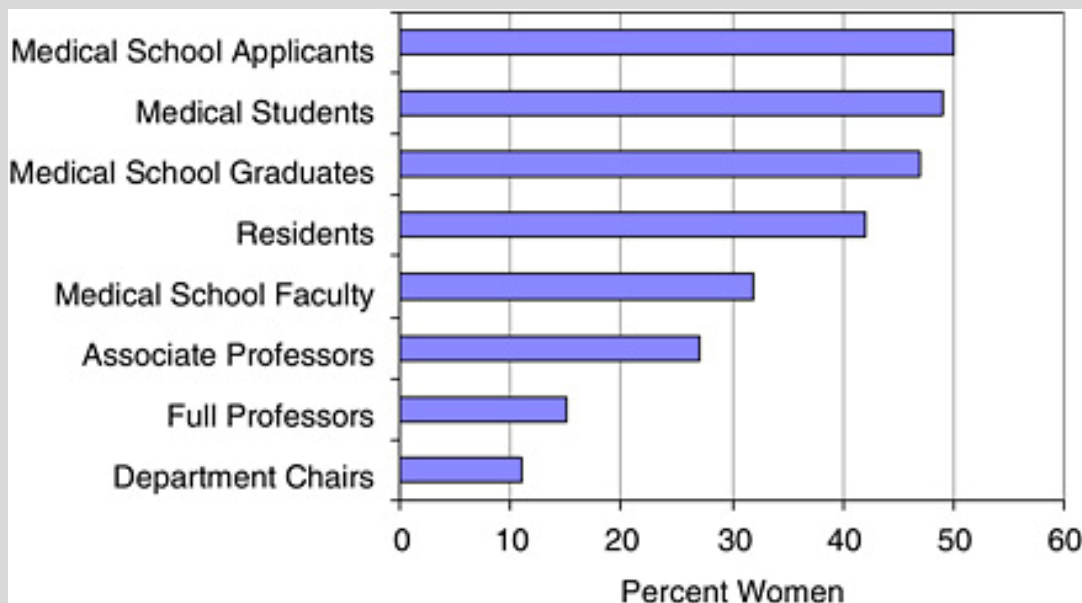


## Leadership/Rank Equity Gap

- Among physicians with faculty appointments at US medical schools, there were sex differences in academic faculty rank, with women substantially less likely than men to be full professors, after accounting for age, experience, specialty, and measures of research productivity
- Sex Differences in Academic Rank in US Medical Schools in 2014. only 21% of full professors, 15% of department chairs, and 16% of deans were women
- Gender Differences in Academic Medicine: Retention, Rank, and Leadership Comparisons From the National Faculty Survey. After 17 years, women were less likely to attain senior rank or to remain in academic fields than their male counterparts.
- Gender disparities in medical leadership and entrepreneurship: Most women do not know their worth and don't negotiate for better salary, work flexibility or promotion.



Source: Committee of Interns and Residents (CIR)  
<https://www.cirseiu.org/women-in-medicine/>



Source: Women in Medicine multimodal project 2016 study

## Other challenges

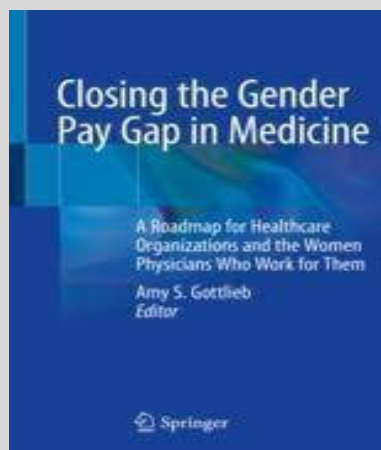
- Lack of mentors and sponsors
- Discrimination/gender bias
- Cultural environment of the workplace
- Imposter syndrome
- The need for better work–life integration, choices made to balance work and family
- Likability Paradox
- Geography
- Different doctoring styles; women spend more time with patients
- Women are assigned more advisees and take on more service and/or greater teaching loads, thus reducing their ability to obtain the same research achievements as their men counterparts

## Gender Inequity in the Era of COVID

- Women submitted fewer academic papers
- Decreased grant submission rate
- Women were more likely to leave academia and turn down leadership roles
- Childcare and domestic responsibilities disproportionately fall on women resulting in a larger number of lost work hours.
- Tenure clock extensions may have a paradoxical effect:
  - Can exclude faculty members from positions of power that require tenure.
  - Can prevent them from applying for large research center grants that require the primary investigator to be tenured.
  - Tenure clock measures will also make the faculty member out of sync with funding mechanisms with time restrictions and decrease long-term earning potential
- Tenure and promotion after the pandemic: Equity requires more than tenure clock extensions.



# Current state and view to the future



Credit to American College of Physicians 2018

## References

- Jena AB, Olenski AR, Blumenthal DM. Sex Differences in Physician Salary in US Public Medical Schools. *JAMA Intern Med.* 2016;176(9):1294–1304. doi:10.1001/jamainternmed.2016.3284
- Jena AB, Khullar D, Ho O, Olenski AR, Blumenthal DM. Sex Differences in Academic Rank in US Medical Schools in 2014. *JAMA.* 2015;314(11):1149–1158. doi:10.1001/jama.2015.10680.
- Tricco AC, Bourgeault I, Moore A, Grunfeld E, Peer N, Straus SE. Advancing gender equity in medicine. *CMAJ.* 2021 Feb 16;193(7):E244–E250. doi: 10.1503/cmaj.200951. PMID: 33593950; PMCID: PMC8034331.
- Anthony T. Lo Sasso, David Armstrong, Gaetano Forte, and Susan E. Gerber (2020) Differences In Starting Pay For Male And Female Physicians Persist; Explanations For The Gender Gap Remain Elusive. *Health Affairs.* 39 (2), 256-263
- Chatterjee P, Werner RM. Gender Disparity in Citations in High-Impact Journal Articles. *JAMA Netw Open.* 2021 Jul 1;4(7):e2114509. doi: 10.1001/jamanetworkopen.2021.14509. Erratum in: *JAMA Netw Open.* 2021 Aug 2;4(8):e2127739. PMID: 34213560; PMCID: PMC8254129.
- Carr PL, Raj A, Kaplan SE, Terrin N, Breeze JL, Freund KM. Gender Differences in Academic Medicine: Retention, Rank, and Leadership Comparisons From the National Faculty Survey. *Acad Med.* 2018 Nov;93(11):1694–1699. doi: 10.1097/ACM.0000000000002146. PMID: 29384751; PMCID: PMC6066448.
- Burstin HR, Arora VM. Gender Disparities in Journal Citations—Another Metric of Inequity in Academia. *JAMA Netw Open.* 2021;4(7):e2114787. doi:10.1001/jamanetworkopen.2021.14787
- Hoff, Timothy; Lee, Do Rim. The gender pay gap in medicine: A systematic review. *Health Care Management Review:* 7/9 2021 - Volume 46 - Issue 3 - p E37-E49 doi: 10.1097/HMR.0000000000000290
- Bates, Carol MD; Gordon, Lynn MD, PhD; Travis, Elizabeth PhD; Chatterjee, Archana MD, PhD; Chaudron, Linda MD, MS; Fivush, Barbara MD; Gulati, Martha MD, MS; Jaggi, Reshma MD, DPhil; Sharma, Poonam MBBS; Gillis, Marin PhD, LPh; Ganetzky, Rebecca MD; Grover, Amelia MD; Lautenberger, Diana MA; Moses, Ashleigh MA. Striving for Gender Equity in Academic Medicine Careers: A Call to Action. *Academic Medicine:* August 2016 - Volume 91 - Issue 8 - p 1050-1052 doi: 10.1097/ACM.0000000000001283

# Transitional Q & A



## Addressing Gender Inequity in Academic Medicine

**Maya S. Iyer MD, MEd, FAAP**

*Associate Professor of Pediatrics*

*Director of Emergency Medicine Faculty Development*

*Associate Director of Women in Medicine and Science*

*Nationwide Children's Hospital*

*The Ohio State University Wexner Medical Center*

## Session Overview

### Goal

Understand that gender inequity in academic relationships is multifaceted and that many different strategies are needed to address the various barriers and components.

### Objectives

By the end of this session, viewers will be able to...

1. Describe four strategies to improve pay equity.
2. Discuss four tactics to improve equity in the promotion and tenure process.
3. Understand the importance of sponsorship for career development.
4. List three strategies to retain women in medicine.

## Improving Pay Parity

- Salary Transparency
- Negotiation Skill Training
- Implicit Bias Training
- Learn from Others



Bates et al (2018) *Acad Med*

## First Steps

- Establish an institutional commitment to understanding and addressing salary equity.
- Scan the environment
- Announce to the campus community the institution's commitment to pay equity.
- Create a multidisciplinary team to explore pay inequity.
- Perform a local salary equity analysis.
- Be transparent in compensation practices

AAMC Exploring Faculty Salary Equity at U.S. Medical Schools by Gender and Race/Ethnicity. Oct 2021

## Promotion and Tenure in Academic Medicine

- AAMC 2018 “The State of Women in Academic Medicine”
  - 25% full professors
  - 18% department chairs
  - 18% deans
- Promotion criteria include:
  - Research
  - National recognition
  - National awards
  - Distinguished lecturer, keynote, or plenary speaker
  - Election to a leadership position

## Improving Equity in Publications

- Women physicians are underrepresented among first authors, senior authors, and guest editorial authors in journals across all medical specialties.
- Blind reviewers to author demographics
  - Remove author gender and rank
- Increase and include women in journal editorial boards and as invited reviewers

Nocco and Larson *JWH* 2021



## Improving Research Funding for Women

- Women are less likely to be successful in obtaining grants
- Implicit bias training for grant reviewers
- Remove male-typed terms from criteria
- Increase women representation on grant review committees



Nocco and Larson *JWH* 2021

## Invited Speakers: Avoiding “MANels”

- Key to increasing national reputation, collaborations/networks, publicize work
- Increase women representation on conference planning committees
- Investigate why women decline speaker invites

Casadevall & Handelsman. *mBio*. 2014

## Improving Representation in Leadership Positions

- Women are underrepresented as journal editor-in-chiefs, medical society presidents, decanal positions
- Term Limits
- Sponsorship



Beeler et al *NEJM* 2019



## Increasing Women Awards Recipients

- Women are less likely to receive scholarship awards
- Women are more likely to receive service and teaching awards
- Increase representation of women in award committees
- Language of nomination letters
- Sponsorship

Nocco and Larson *JWH* 2021



## Sponsorship

A professional relationship in which an established or rising leader identifies and chooses an outstanding junior talent, develops that person's career, and reaps significant rewards for these efforts.

Mentors give. Sponsors invest.



## Sponsorship—A Two-Way Street



## Sponsorship Benefits for...

### Proteges

- Receive credibility “buy-in” from senior leadership
- Pay raises
- Promotion
- High-profile assignments

### Sponsors

- Accelerates promotion
- Increase professional satisfaction
- Opened to new markets
- Reliable loyalty
- Allows to shine

## Sponsorship and Gender Equity

- AAMC 2018 “The State of Women in Academic Medicine”
  - 25% full professors
  - 18% department chairs
  - 18% deans
- Keating et al (2022) *JCEHP*
  - Sponsorship is crucial for midcareer women faculty
- Sponsorship in corporate America

“I’m a huge proponent of sponsorship. I can track the times when my career accelerated due to male sponsorship—mostly white male sponsorship—early in my career. I happened to meet the gentleman who was the head of corporate banking early in my career. He stayed with me as I moved through my career, and that made a huge difference. Stalls in my career have been due to the absence of sponsorship or not having the right one.”

*Beverly Anderson, Wells Fargo*

## Women Faculty Retention

- Women leave academic medicine for numerous reasons
- Carr et al (2017) showed that several institutions do not have retention programs
- Gender bias training alone is not effective
- Work Life Integration
- Formalized Mentorship and Institutional Commitment

## Women Faculty Retention

- Career Development Programs

- ELAM

- 15 of the 29 women who are deans at U.S. medical schools
- 6 of the 12 women who are deans at U.S. dental schools
- 3 of the 21 women who are deans of U.S. public health schools.
- 38 ELUMs have served as past, interim, or permanent deans
- 91 chief executive or academic officers
- 233 department chairs
- 219 center directors
- 203 associate deans

Jagsi and Spector (2020) *Acad Med*

## Addressing COVID-19's Impact on Women in Medicine

- Supplementary research funding to restart lab work
  - Equitable distribution of institutional/departmental funds
- Avoid abandoning DEI initiatives
- Paid caretaking leave/flexible work schedules
- Leadership needs to be aware of their asks of women/minorities



Woitowich et al *Acad Med* 2021

## Summary

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Arwa Shana'ah, MD (arwa.shanaah@osumc.edu)

Maya Iyer, MD, MEd (maya.iyer@nationwidechildrens.org)