



University of California  
San Francisco

# Overcoming Barriers to Gender Equity in Medicine

Persistent disparities for women  
in medicine and the way forward

Rita Redberg, MD, MSc, FACC, Professor of Medicine/Cardiology

Thanks to:

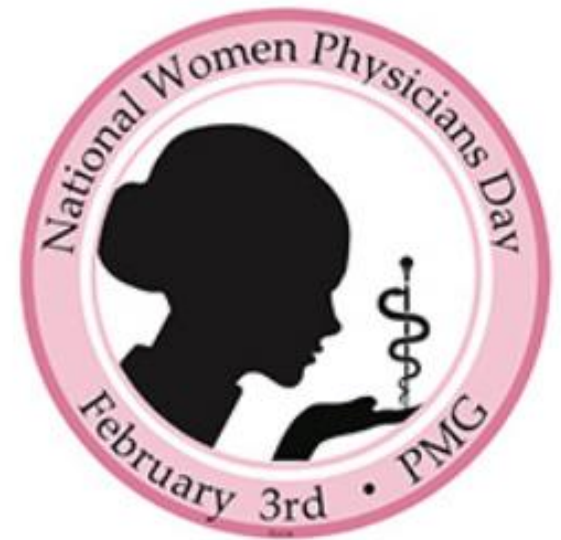
Anna Parks, MD,

Jessica Rubin, MD, MPH

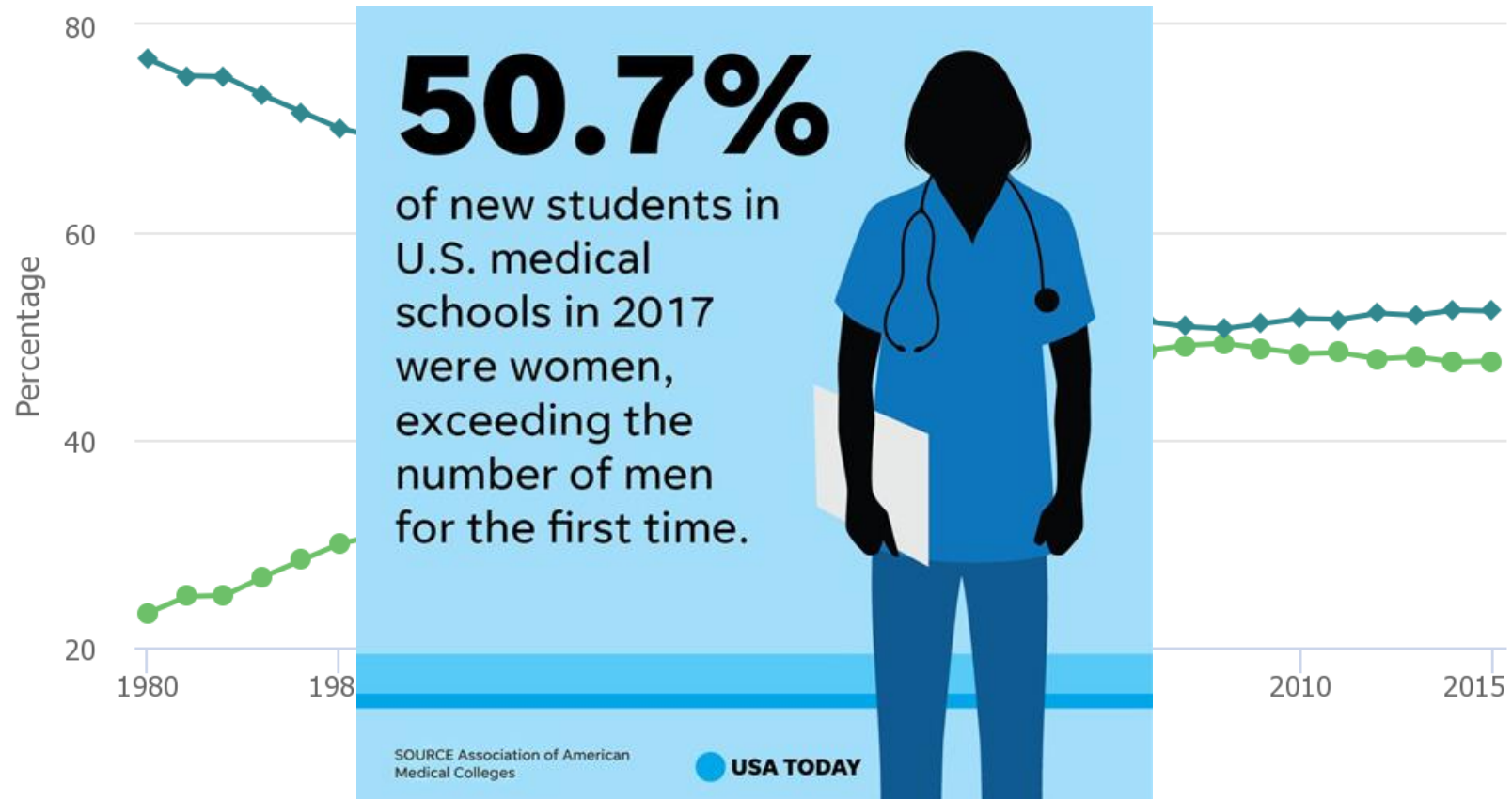


# Personal Influences

- Medical School – University of Pennsylvania
- Residency and Fellowship – Columbia Presbyterian
- 1994 – American Heart Association Women in Cardiology Committee
  - Pat Heim – Hardball for Women



# Medical school graduates over time



Source: AAMC

# Women may be better doctors

**npr**  
shots  
TREATMENTS  
Patients Cared For By Female Doctors Fare Better Than Those Treated By Men  
Listen · 4:55 + Queue  
December 19, 2016 · 11:28 AM ET

**WOMEN IN THE WORLD**  
ZIPLINE · NEW YORK SUMMIT · EVENTS  
Do no harm  
Study finds elderly patients do better under the care of women doctors  
WITW STAFF 12.20.16

**Los Angeles Times**  
SUBSCRIBE 4 weeks for 99¢ LOG IN  
MONDAY MAY 15, 2017 LOCAL SPORTS POLITICS ENTERTAINMENT OPINION MOST POPULAR 61°  
Science / Science Now  
**How to save at least 32,000 lives each year: Replace male doctors with female ones**  
COSMOPOLITAN STYLE BEAUTY LOVE VIDEO WEDDINGS  
**Study Finds Women Are Better Doctors Than Men**  
If men were as good as women, an estimated 32,000 lives could be saved per year.

Source: Tsugawa, et al. JAMA IM, 2017.

# Yet gender disparities persist in medicine

Fewer women in leadership positions



Women physicians are paid less



Sexual harassment still exists

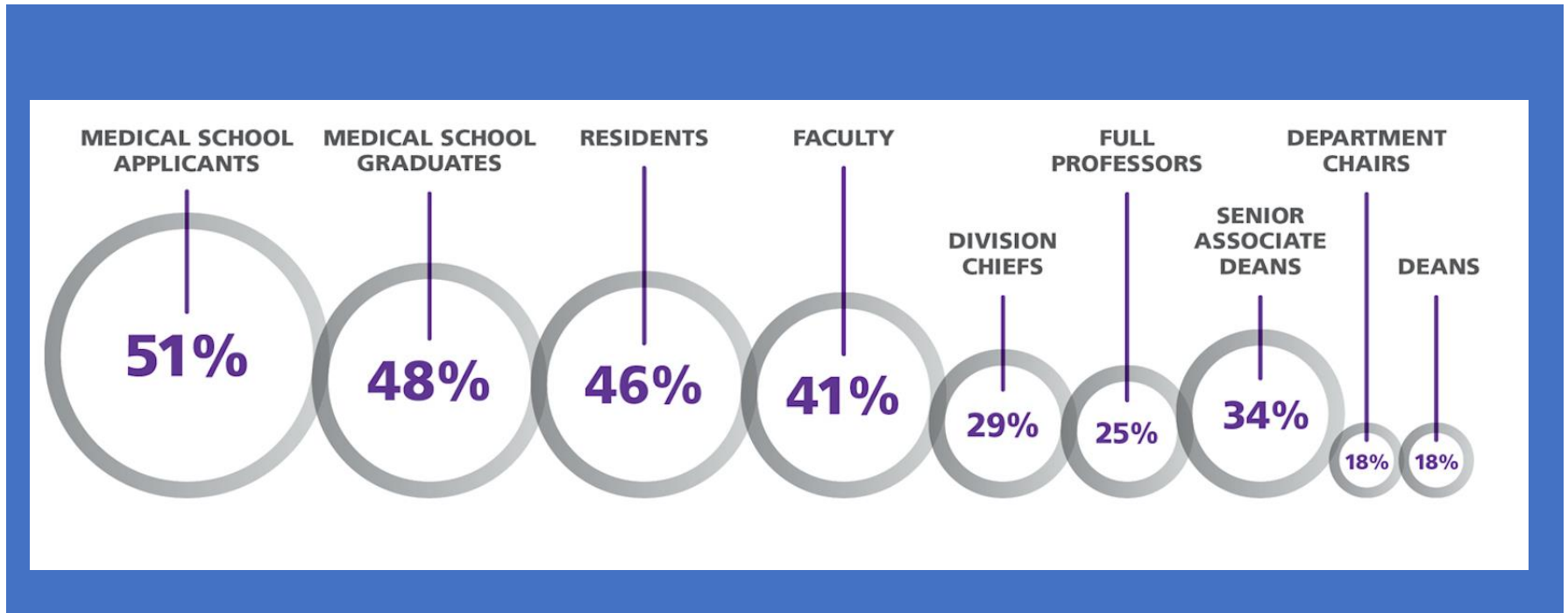


# Today's outline

- Describe female leadership disparity in medicine
- Describe gender pay gap in medicine
- Describe discrimination and sexual harassment in medicine
- Discuss initiatives and other potential solutions

# Female leadership disparity in medicine

# Leaky pipeline in academic medicine



Source: AAMC, 2014.



# Disparity persists despite adjustment



Adjusted for training, specialty, experience, research funding, clinical trial participation, and scientific authorship

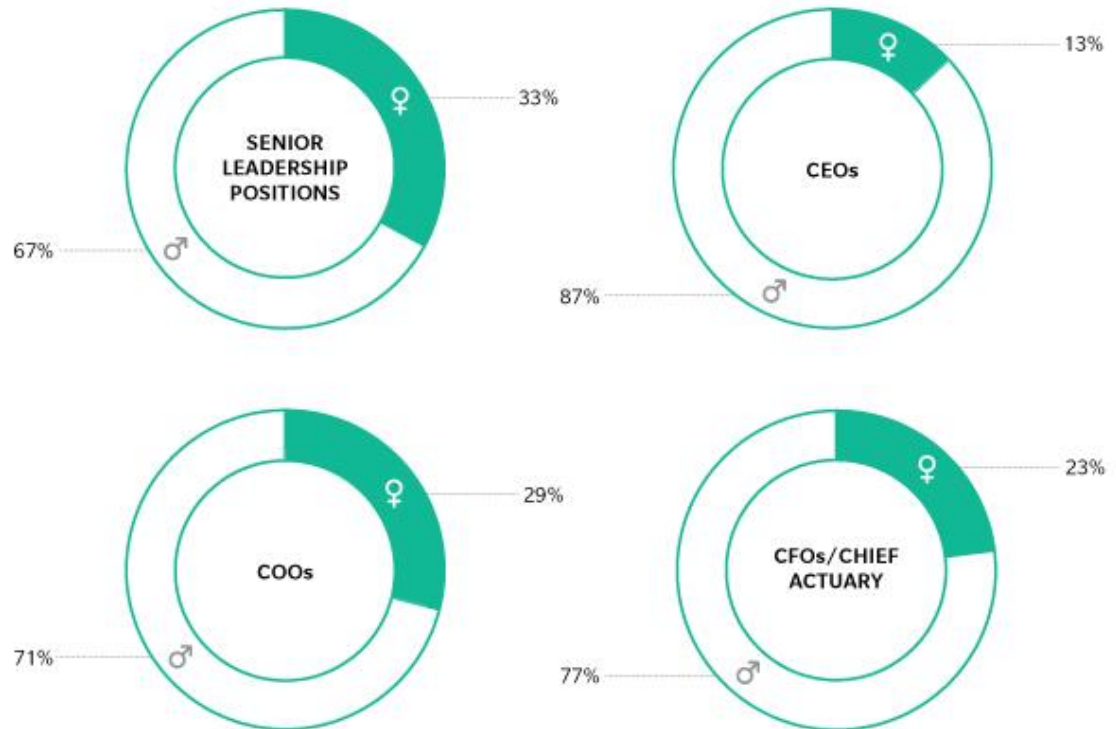
Women less likely than men to be full professors (absolute adjusted difference in proportion,  $-3.8\%$ ; 95% CI,  $-4.4\%$  to  $-3.3\%$ ).

Source: Jena, et al. *JAMA*, 2015.

# Non-academic leadership in medicine

AMONG HEALTHCARE INSURERS AND PROVIDERS, HOW DO WOMEN FARE IN THE INDUSTRY?

Women make up **30%** of hospital executive teams



It takes women on average  
**3-5 years longer**  
to reach CEO  
(depending of type of organization)

Source: OliverWyman Women in Healthcare Leadership 2019

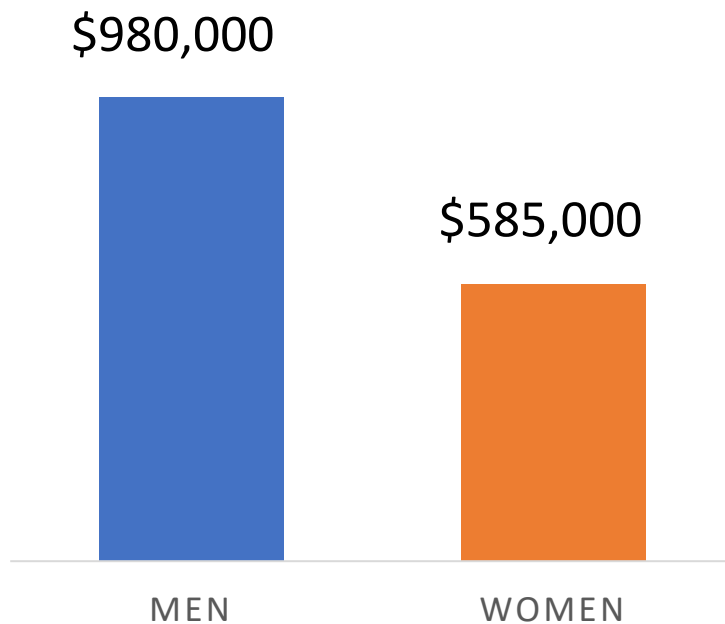
# Multiple contributors to leadership disparity



# Reasons for leadership disparity

## Less institutional funding

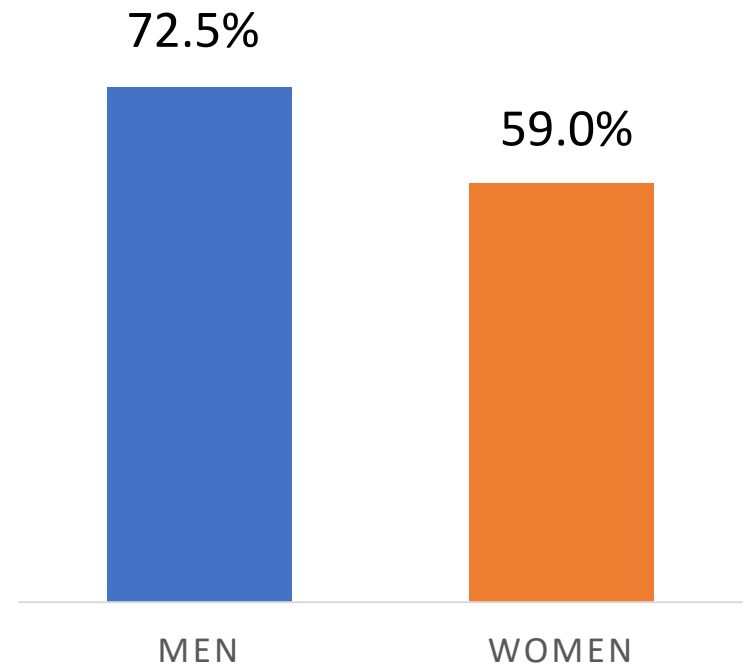
Start-up packages 67.5% higher for men than for women



Source: Sege, Nykiel-Bub, Selk. *JAMA*, 2015.

## Lack of sponsorship

Women are undersponsored compared to men



Source: Patton, et al. *JAMA Internal Med*, 2017.

# Reasons for leadership disparity: bias in Grand Rounds

Percentage of female GR speakers was significantly lower (median 26.2%) than female composition of the workforce.

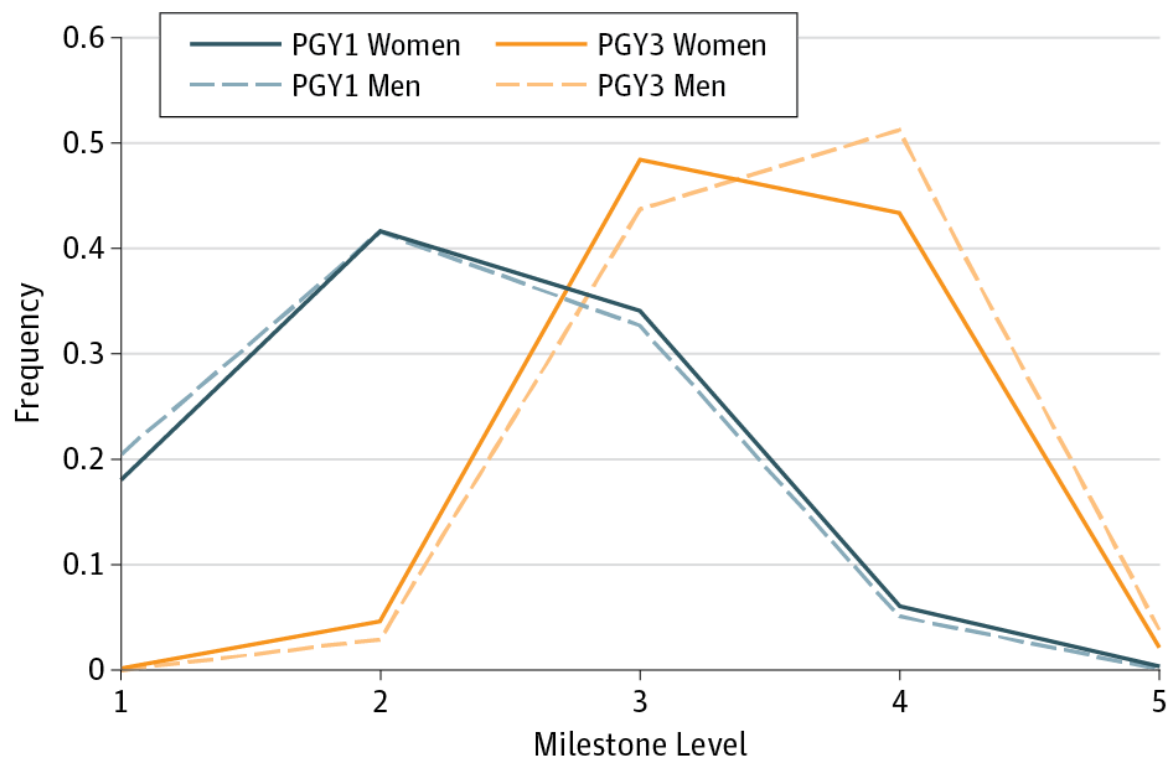
Female GR speakers are much less likely to be introduced as “Dr.”



*The subject of tonight's discussion is: Why are there no women on this panel?*

Sources: Boiko, et al. *JAMA Intern Med*, 2017; Files, et al. *Journal of Women's Health*, 2017.

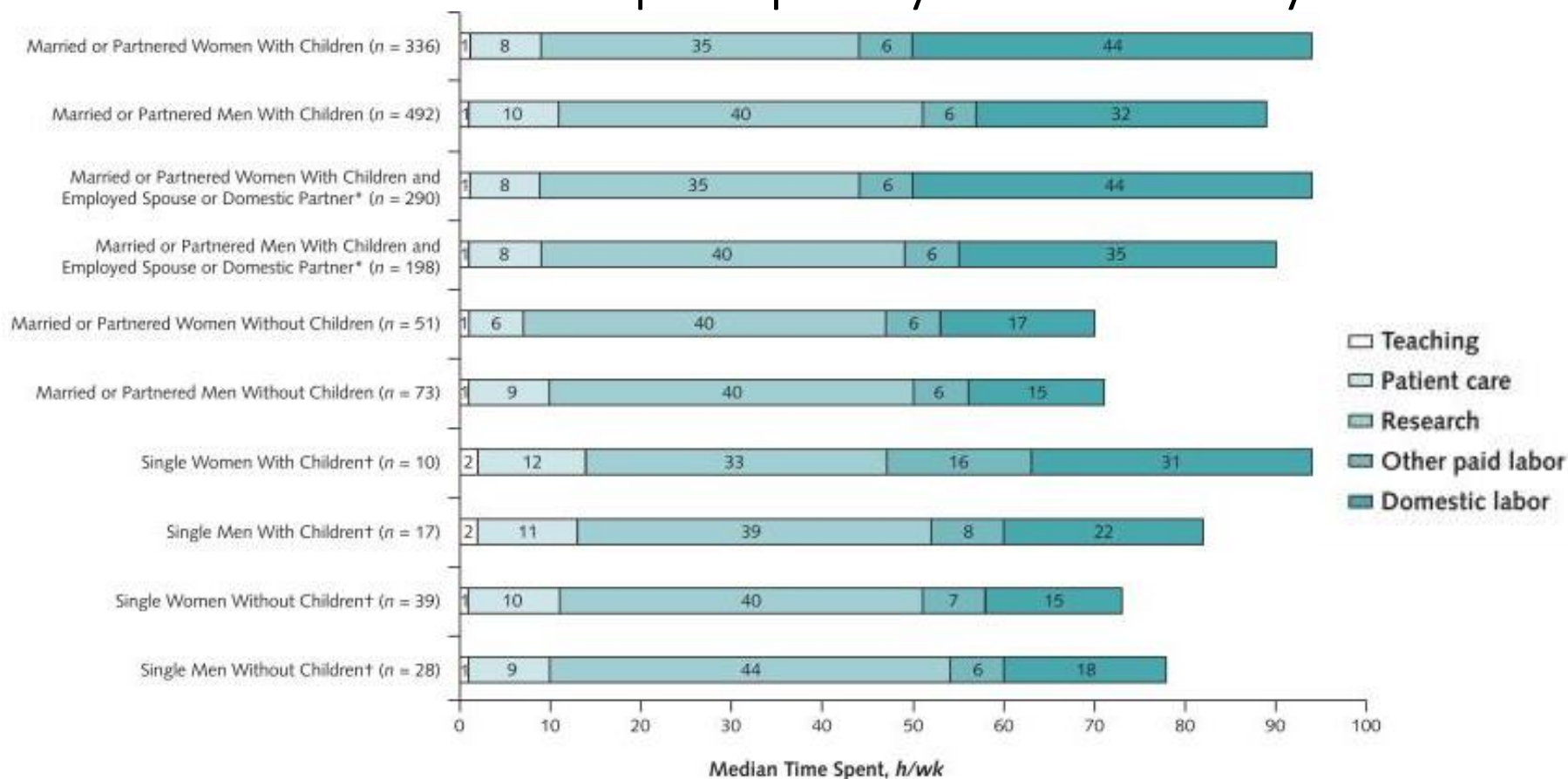
# Reasons for leadership disparity: bias in evaluation



- Male and female EM residents receive similar evaluations at the beginning of residency
- By the end of training, male EM residents were rated 0.15 points higher than their female colleagues

Source: Dayal A, et al. *JAMA Intern Med*, 2017.

# Reasons for leadership disparity: work-family conflict



Among K grant awardees, women spent 8.5 more hours per week on domestic activities and were more likely to take time off for childcare than men (42.6 vs. 12.4%).

Source: Jolly S, *Annals of Int Med*, 2014.

# Reasons for disparity: Depression and work-family conflict

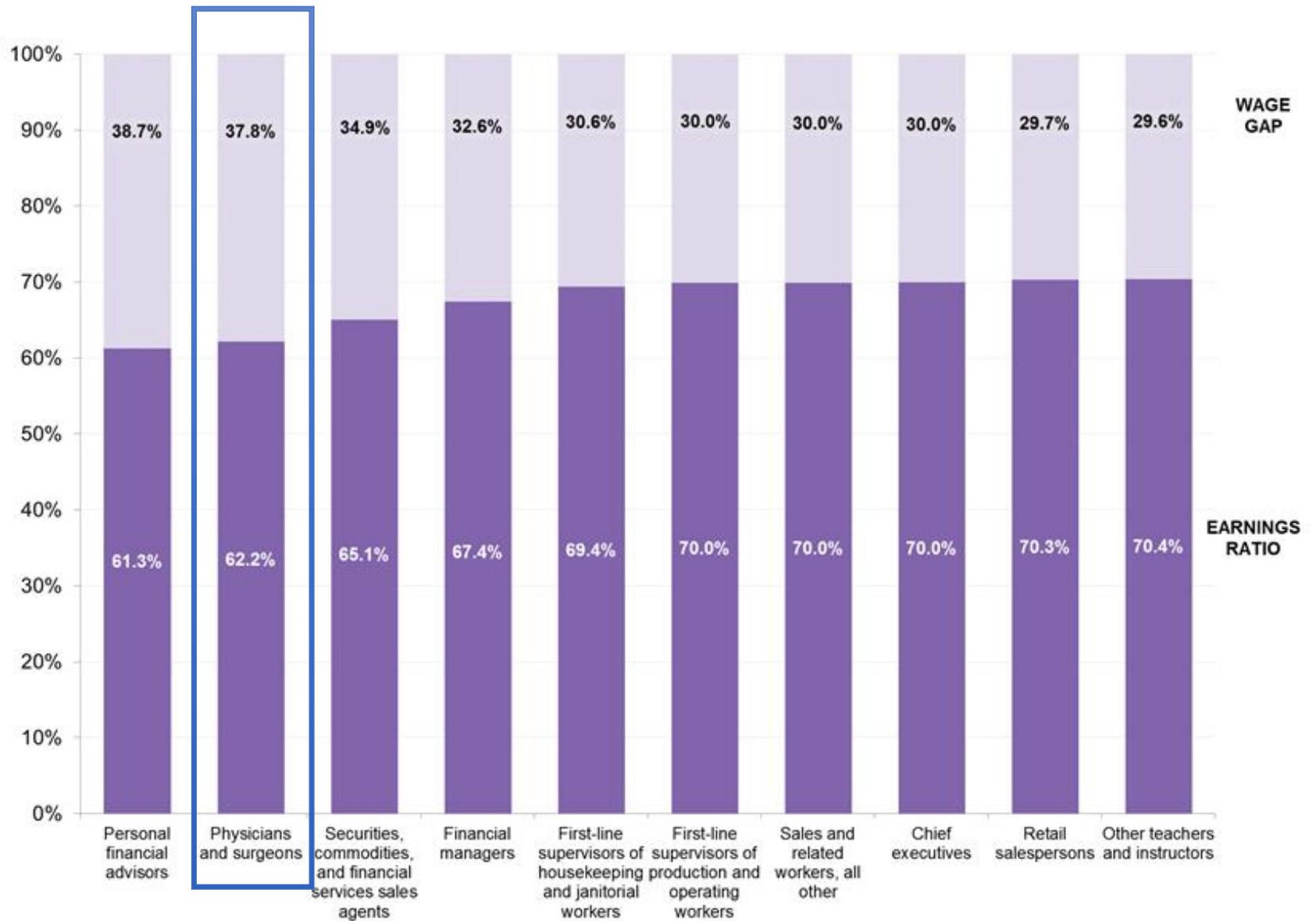
- Before starting residency, men and women had similar levels of depressive symptoms, but after 6 months of intern year, women experience a greater increase in depressive symptoms than men (+3.2 points vs +2.5 points on PHQ-9,  $p < 0.001$ ).
- Work-family conflict accounted for more than a third (36%) of the disparity in rates of depression.
- Depressed physicians are more likely to leave the medical profession, reduce work hours, and change their specialty.

Source: Guille C, *JAMA Intern Med*, 2017

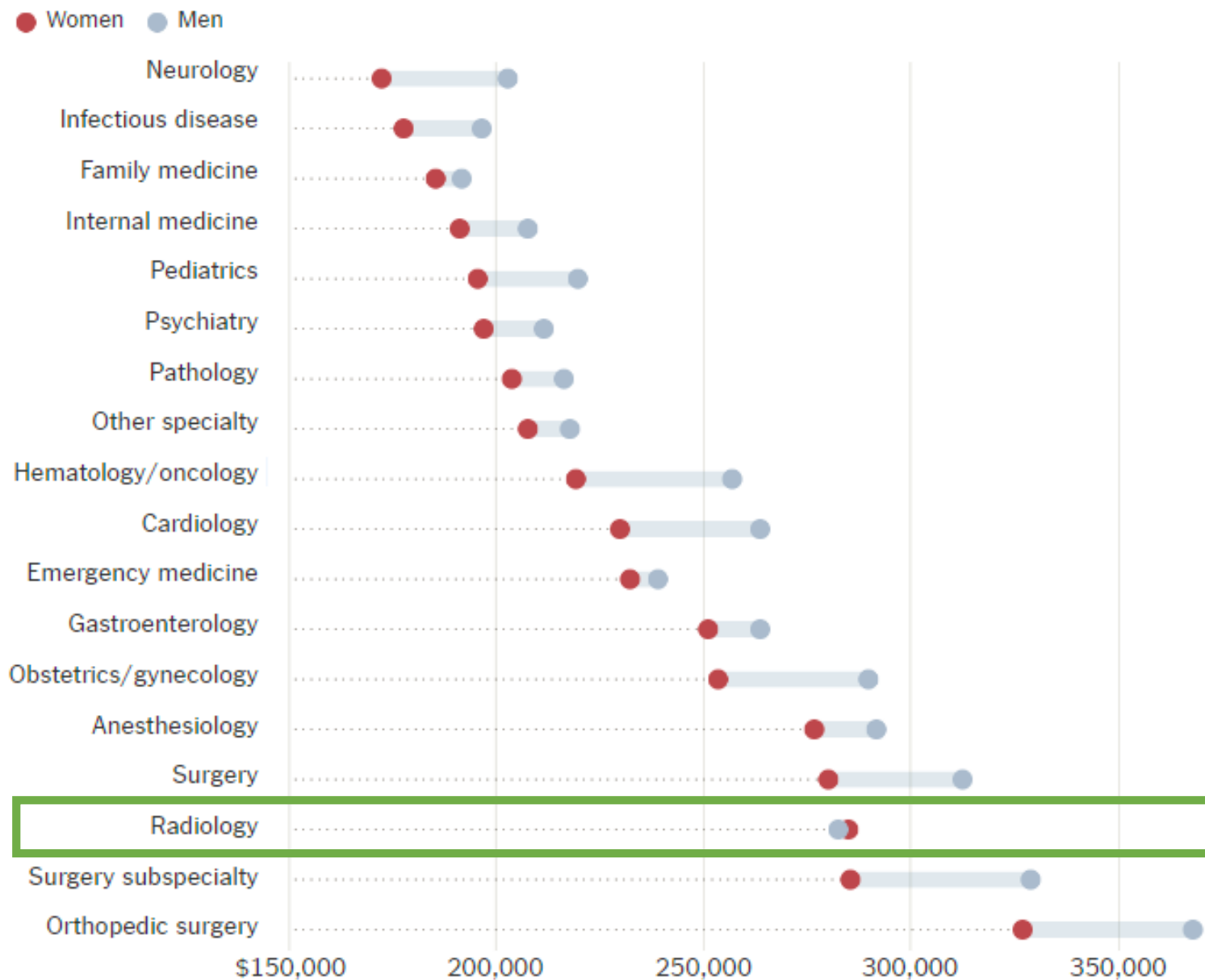
---



# Gender pay gap in medicine



Source: US Bureau of Labor Statistics



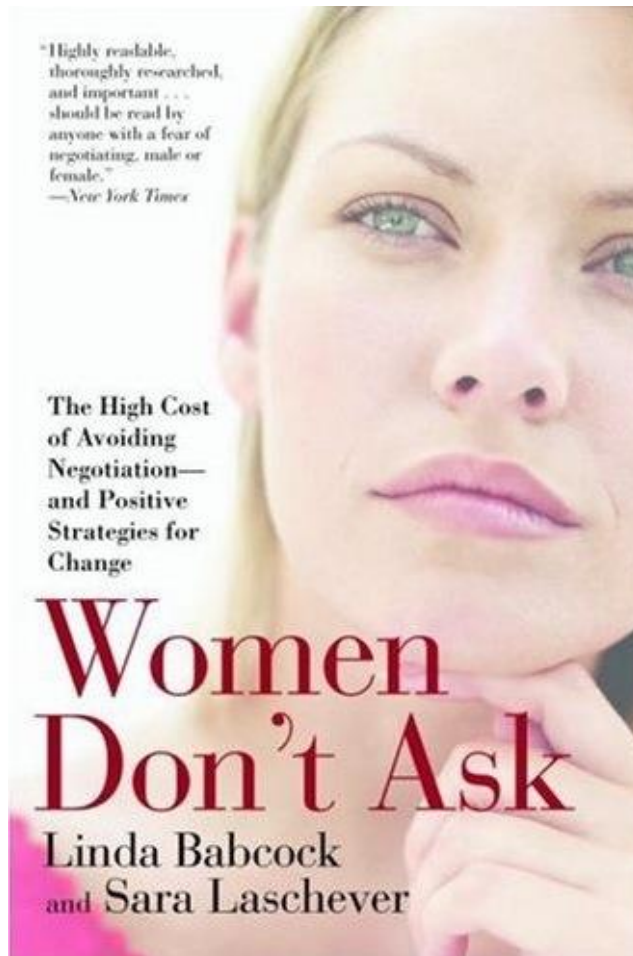
Source: Jena et al. *JAMA IM*, 2016.

# Gender pay gap in medicine, adjusted

Year	Author	Sample Size	Unadj. Pay Gap	Adj. Pay Gap
1986	Ohsfeldt & Culler	4,411	30%	12-13%
1987	Silberger	--	38%	12-13%
1996	Baker	6,053	29%	0-4%
2011	Lo Sasso	8,233	17%	~9%
2016	Jena	10,241	20%	8%
2017	Doximity	>36,000	27%	N/A

**RESIDUAL PAY GAP**

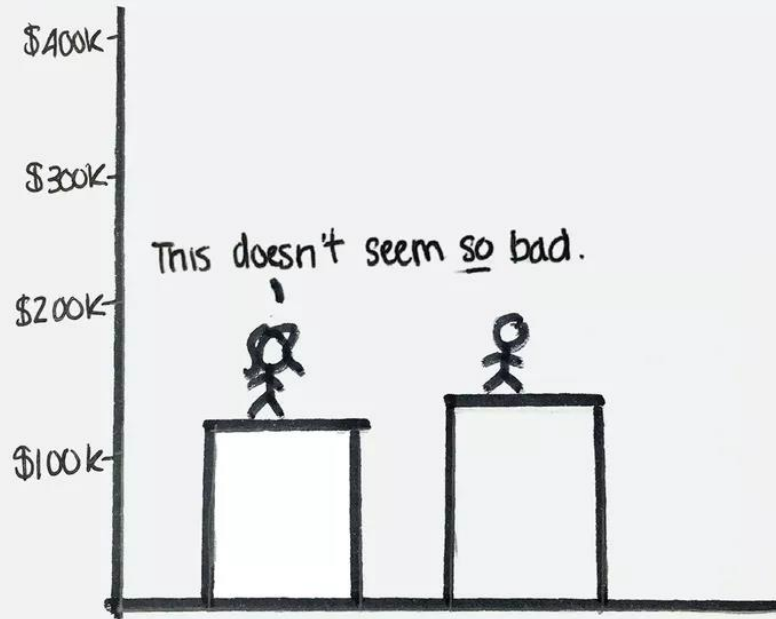
# Unmeasured factor: negotiation



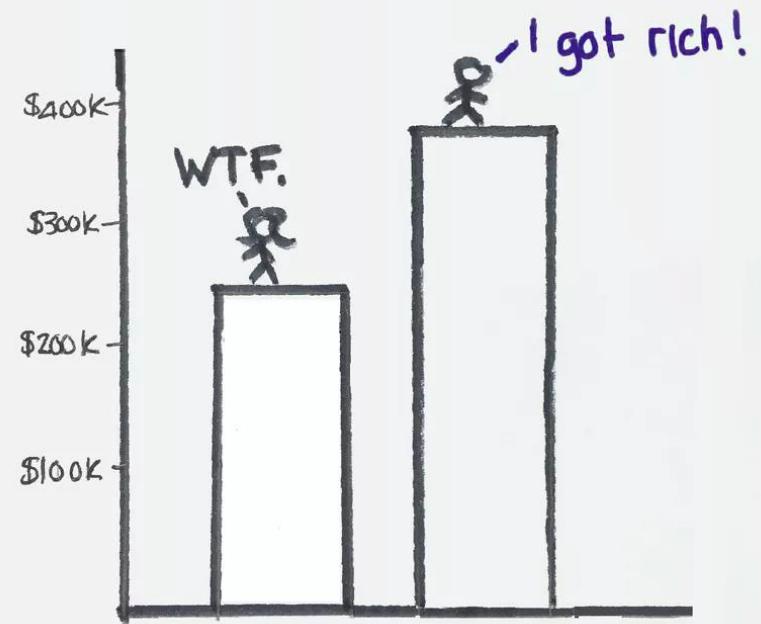
- Survey of students graduating from professional schools - “Did you negotiate your offer?”
  - 7% of women
  - 57% of men
  
- “Sometimes it does hurt to ask”
  - 2005: Men and women videotaped reading same negotiation script, women too demanding
  - 2007: More willing to work with “unlikeable” men than women

# Pay gap over working years

## 1 year out of business school

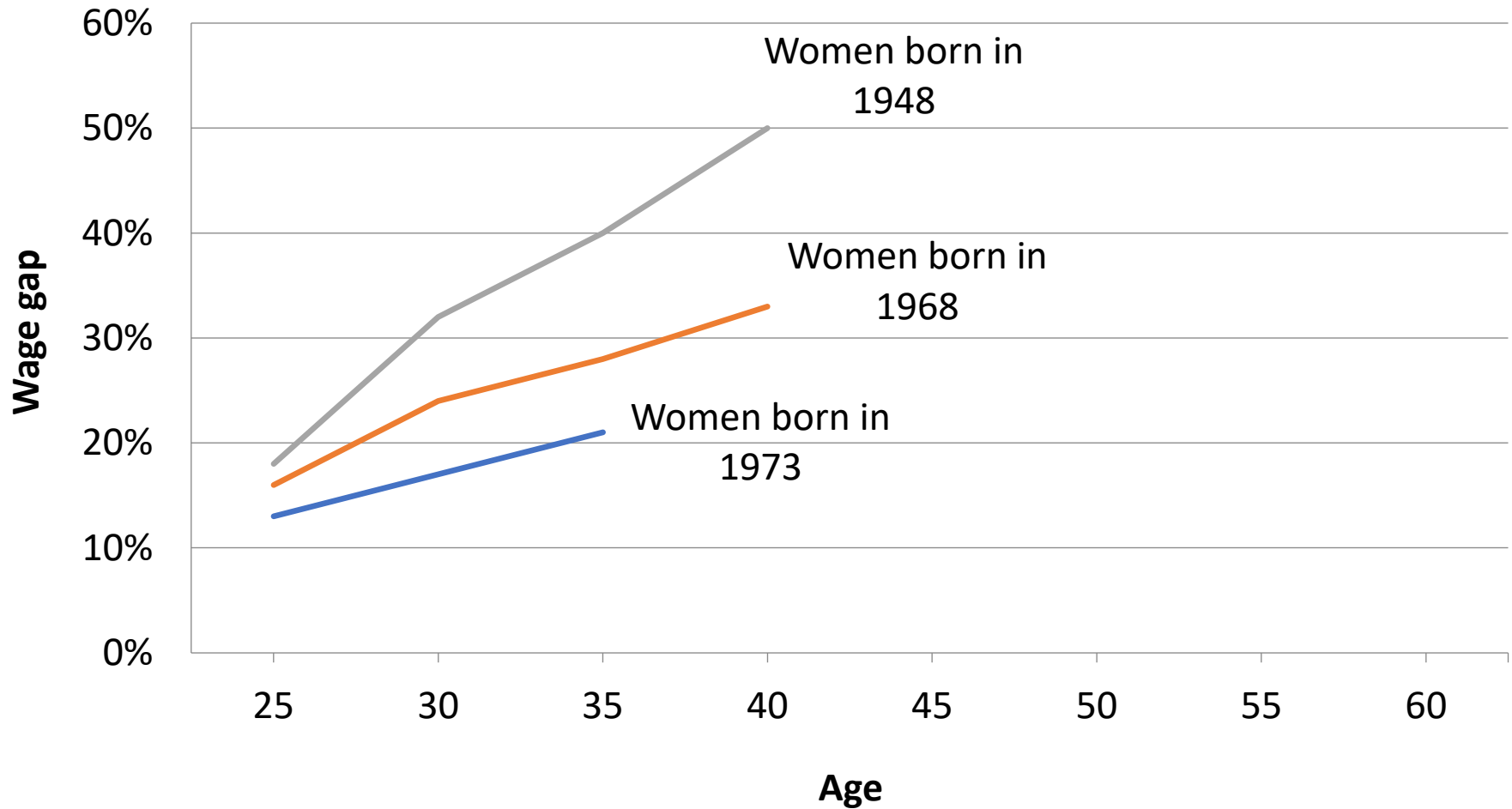


## 9 years out of business school



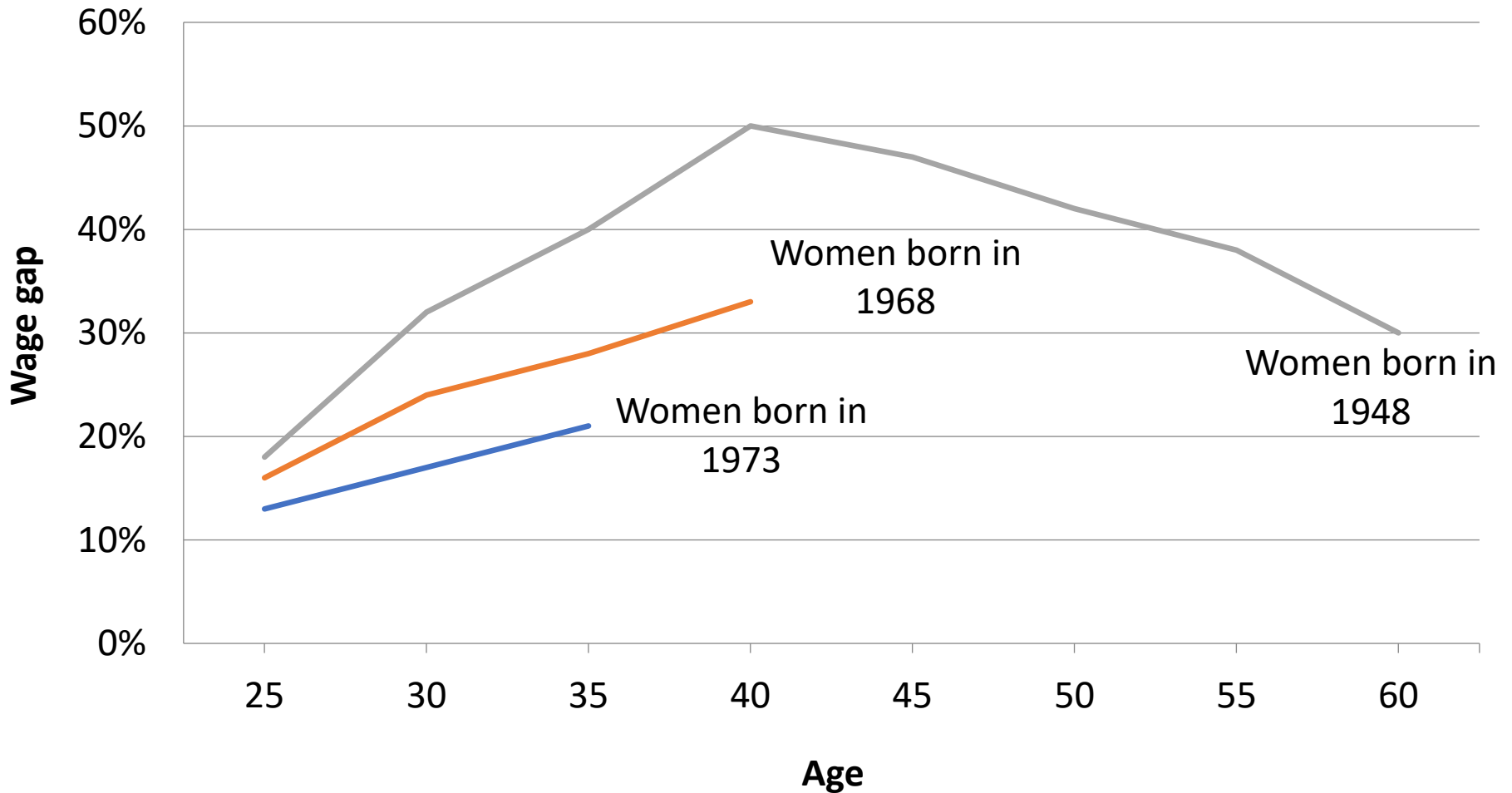
Sources: Bertrand et al, *American Economic Journal*, 2010, Vox 2017.

# Pay gap by age



Source: Goldin, *American Economic Review*, 2014.

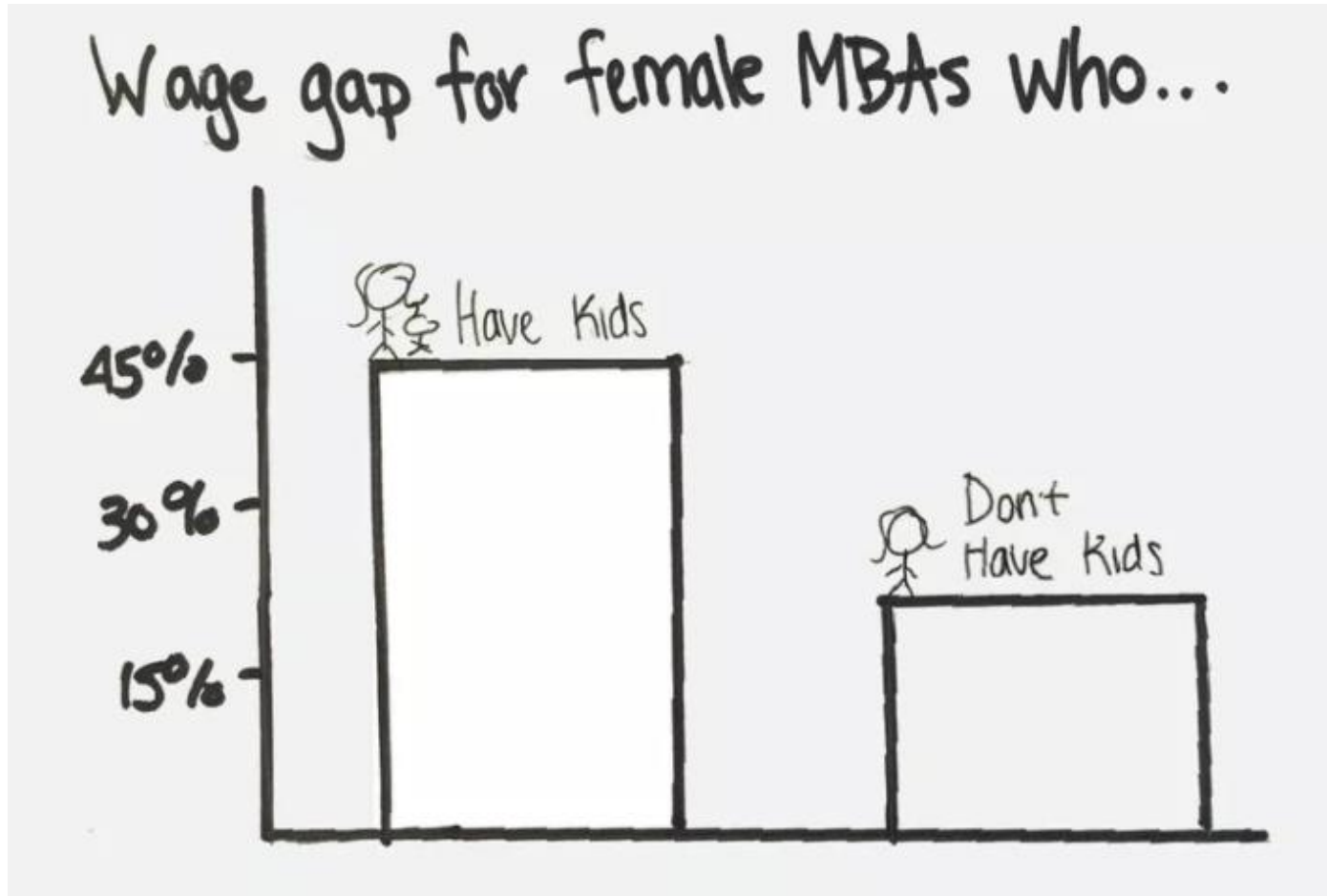
# Pay gap by age



Source: Goldin, *American Economic Review*, 2014.




# The motherhood penalty



Sources: Bertrand et al, *American Economic Journal*, 2010, Vox 2017.

## ***Claudia Goldin Wins Nobel in Economics for Studying Women in the Work Force***

Her research uncovered the reasons for gender gaps in labor force participation and earnings. She is the third woman to win the prize.

 Share full article



# Unmeasured factor: temporal flexibility

Positive deviants: people (or professions) whose uncommon but successful behaviors or strategies enable them to find better solutions to a problem than their peers

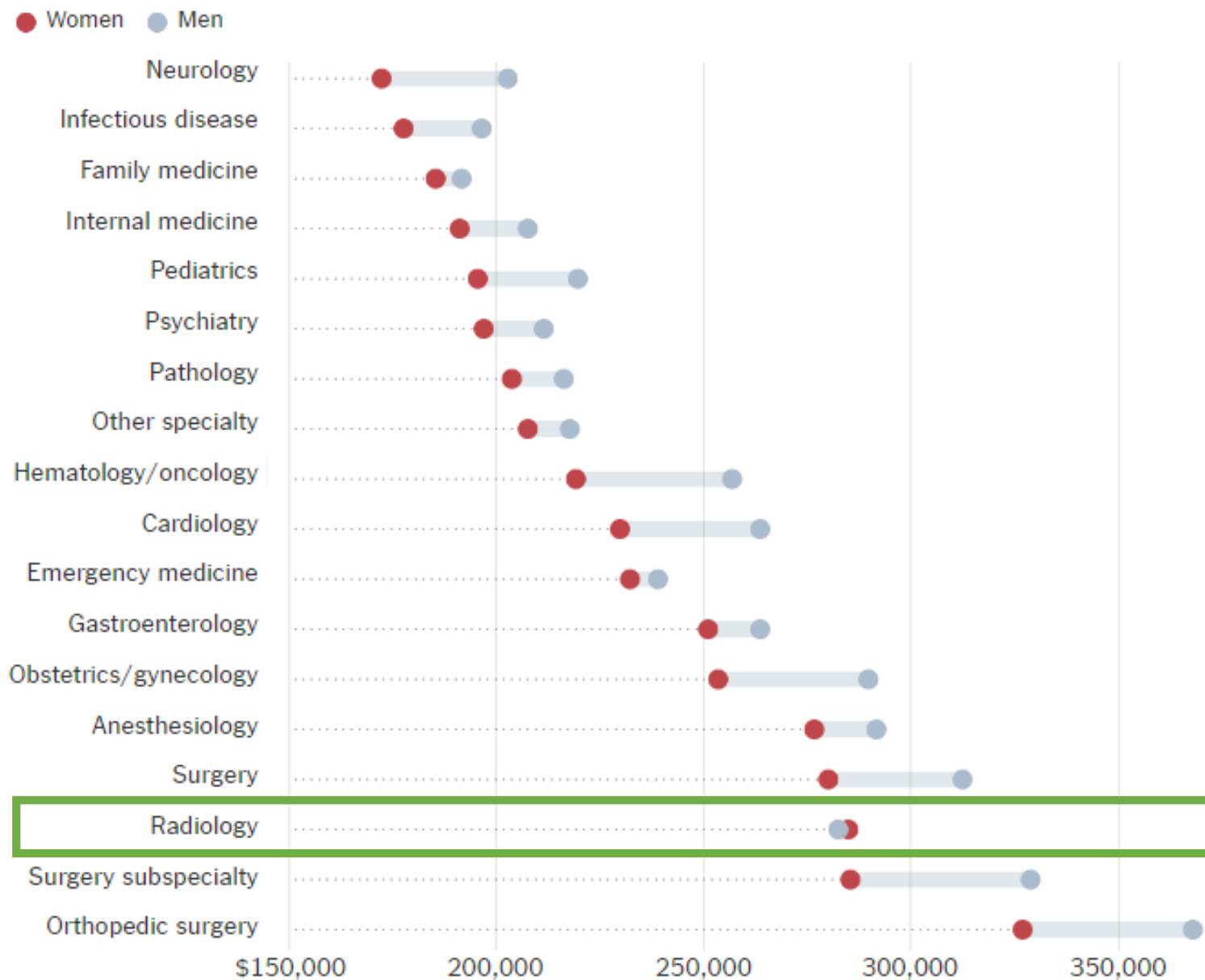
## High temporal flexibility

- Allow for:
  - Flexible hours
  - Ability to work from home
  - Completion of projects outside of typical working hours
- **WITHOUT** decrease in hourly earnings
- No penalty for working part-time
- Especially valuable for caregivers, mostly women

## Low temporal flexibility

- Premium placed on working relationships during business hours
- Cannot swap workers without frustrating clients (or patients)
- Higher premium paid for working long hours
- Steep penalty paid for:
  - Working fewer hours
  - Interruptions to career

Sources: Goldin, *American Economic Review*, 2014; Freakonomics Radio, 2016.



Source: Jena et al. *JAMA IM*, 2016.

# Why is radiology different? A hypothesis.

- Low switching cost between radiologists
- There are fewer “client” or “patient” relationships that need to be cultivated, so there is no premium paid for working 9-5 Mon-Fri
- Technology allows for flexibility in location of reading scans
- Most radiologists are not self-employed

Radiology, emergency medicine, and anesthesiology have **HIGH** temporal flexibility and **LOW** pay gaps



# Discrimination and sexual harassment in medicine

# Sex discrimination in medicine



## Discrimination in referrals

Female surgeons (with equal training and seniority) receive 5.4 (95% CI, -6.4 to -4.5) fewer new patient referrals per month than male surgeons.

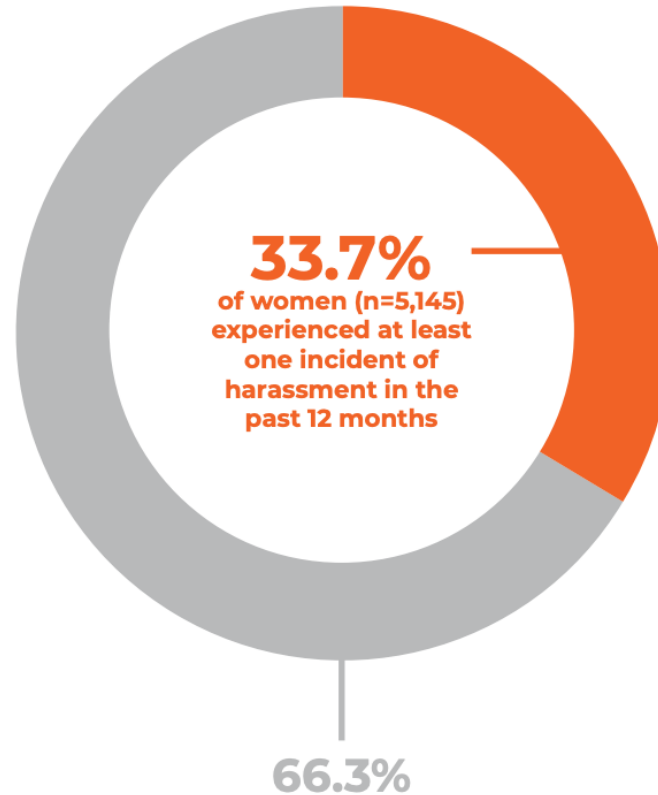
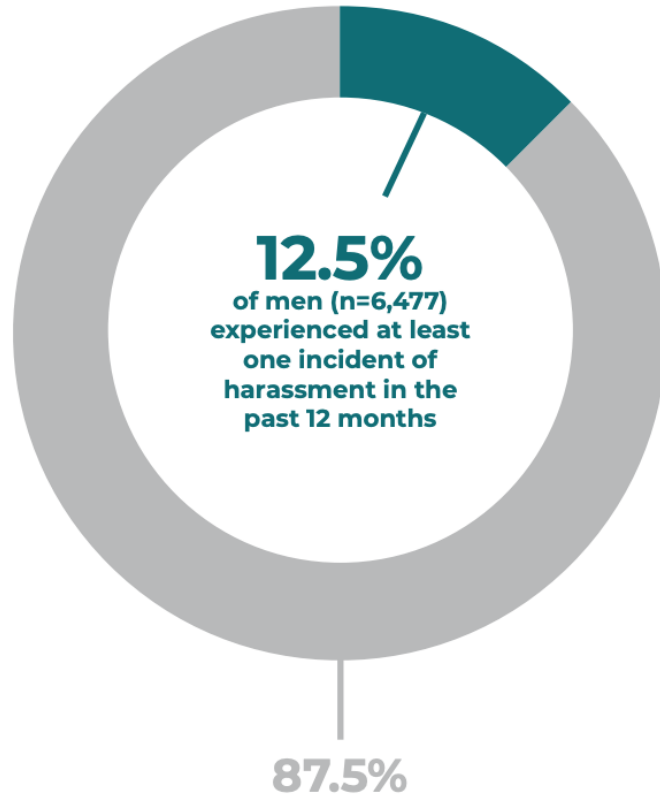
Source: Chen YW, *Am J Surg*, 2021.

## Maternal discrimination

4 out of 5 physician mothers surveyed perceived discrimination based on gender, motherhood, maternity leave or breastfeeding.

Source: Adesoye T, et al. *JAMA Intern Med*, 2017.

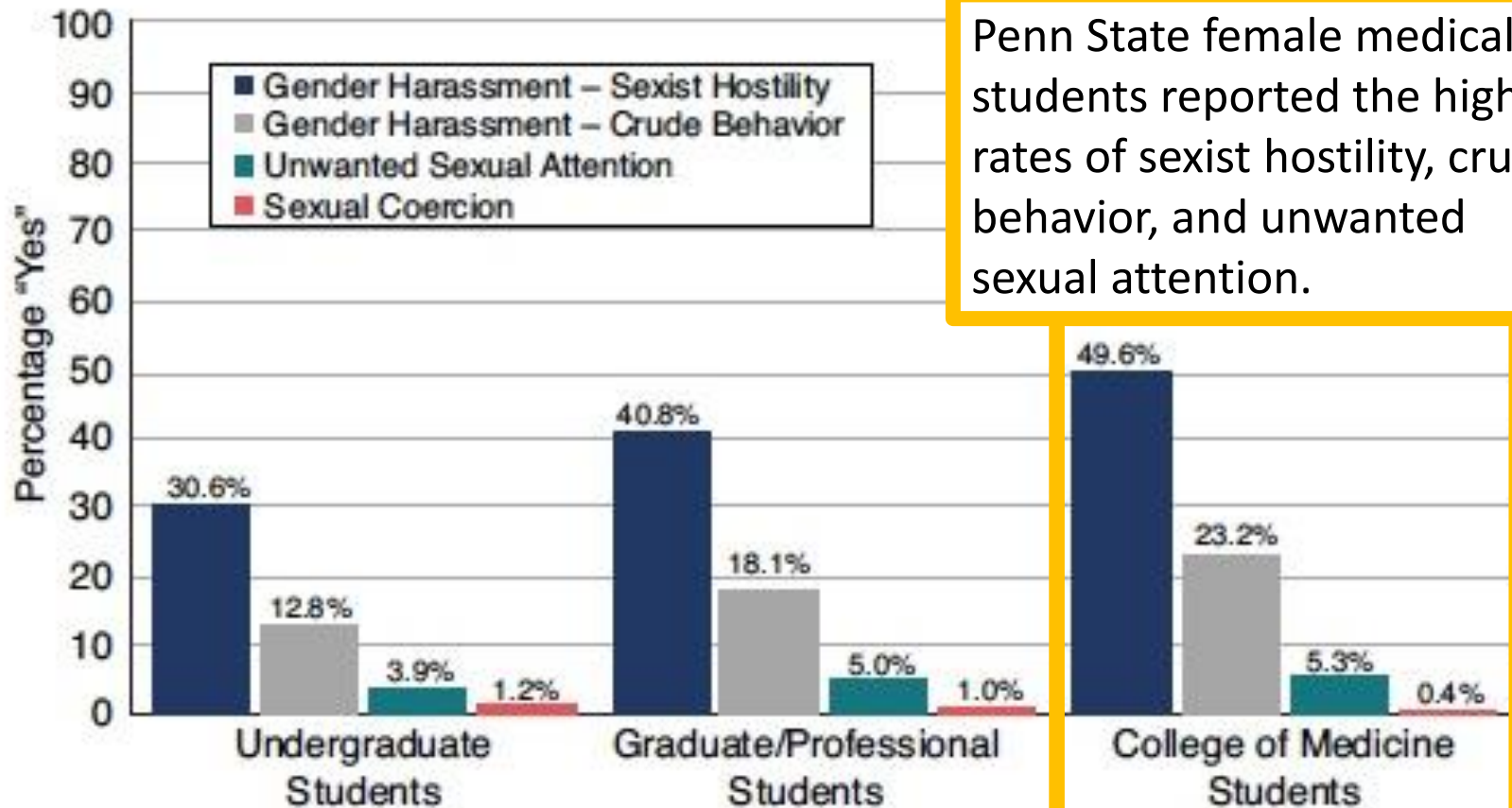
# Sexual harassment in medicine: Faculty



Source: AAMC report 2022.



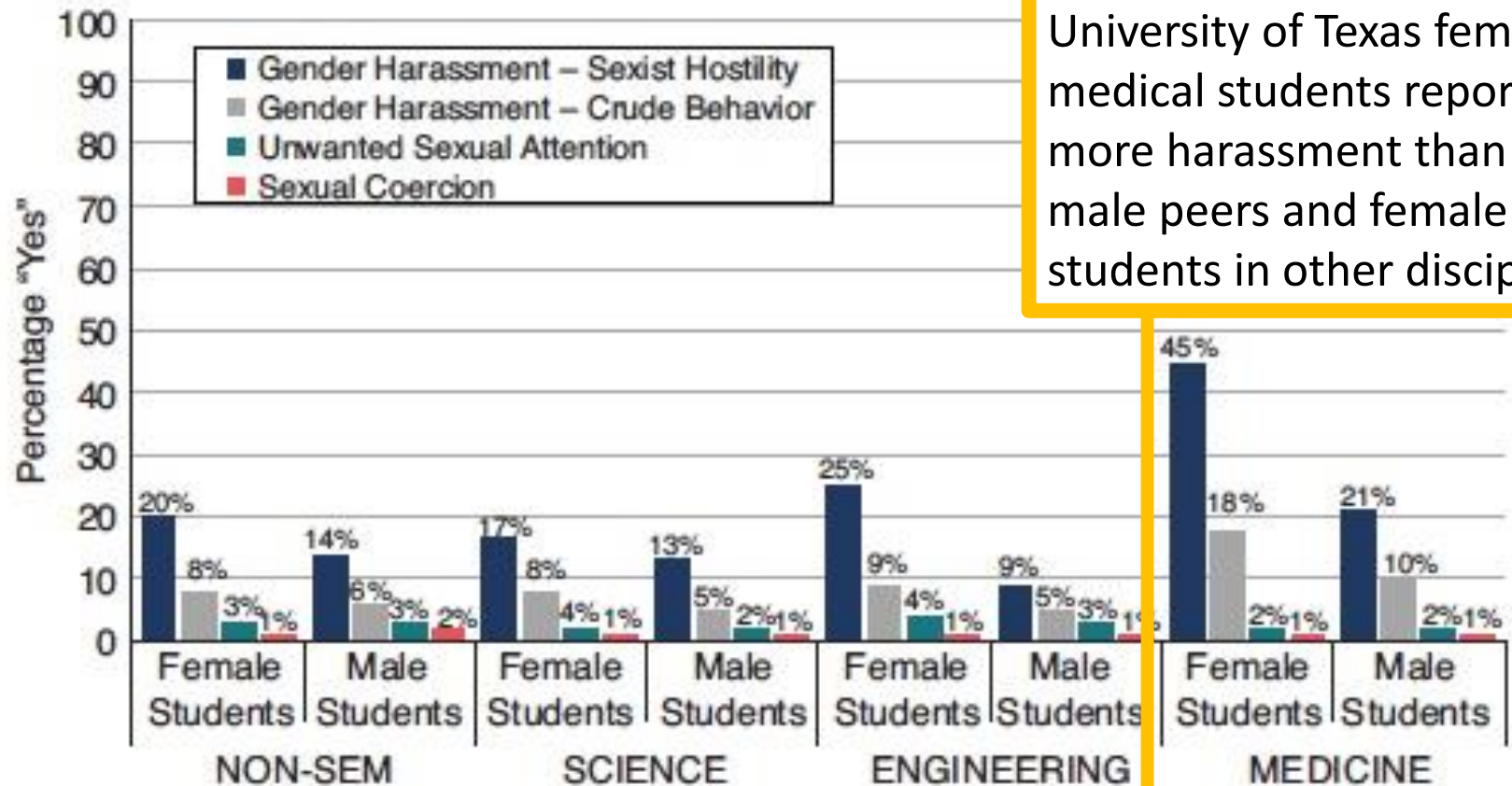
# Faculty/staff-on-student sexual harassment



Penn State female medical students reported the highest rates of sexist hostility, crude behavior, and unwanted sexual attention.

Source: NASEM report 2018.

# Faculty/staff-on-student sexual harassment

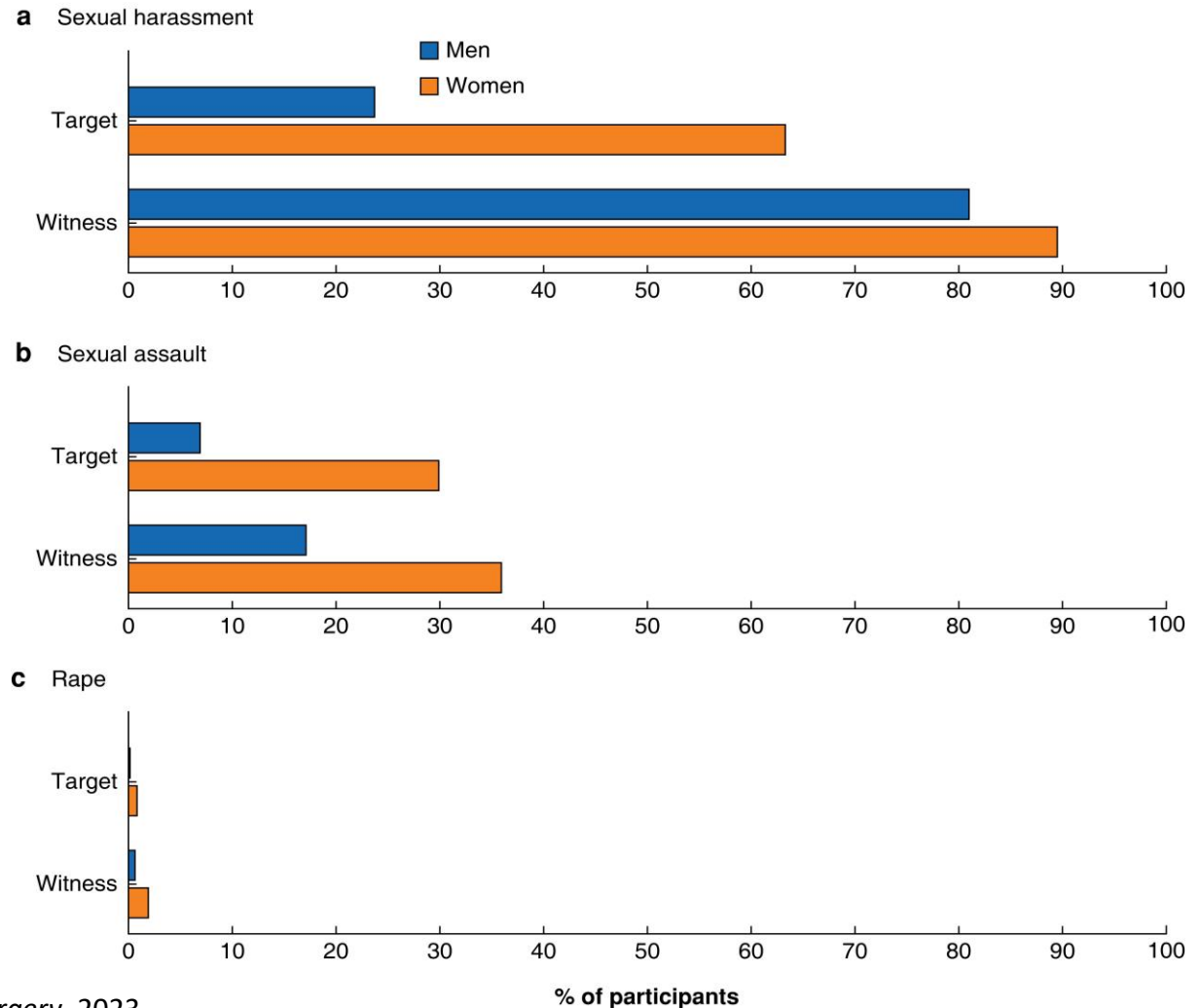


University of Texas female medical students reported more harassment than both male peers and female students in other disciplines.

Source: NASEM report 2018.

# Sexual harassment in surgical workforce

Over 60% of women in the U.K. surgical workforce experienced sexual harassment in the past 5 years.



Source: Begeny et al, *British Journal of Surgery*, 2023

# Academic Medical Center Initiatives

# Gender disparities: proposed solutions

## Structural interventions

- Hiring, promotion and wage transparency
- Affordable child care
- Mandatory paid leave
- Temporal flexibility
- Tenure clock

## Educational interventions

- Leadership training
- Negotiation skills training
- Unconscious bias training
- Change the structure and timing of training

## Individual interventions

- Sponsorship
- Community-building
- Allyship

# Structural intervention: family friendly policies and the Faculty Family-Friendly initiative

## **UCSF Family Friendly Policies:**

- Active service-modified duties
- Childbearing leave
- Campus child care services
- Domestic partner / spouse benefits
- Family Medical Leave (FMLA) benefits
- Parental leave without pay
- Stopping the eight-year clock
- Temporary or part-time appointments

## **UCSF Faculty Family-Friendly Initiative (FI3)**

### **Mission:**

- Assess current policies and practices that impact the climate and environment for faculty with families, and make recommendations for improvement

### **Sample Recommendations:**

- Raise paid childbearing leave to 12 weeks, and make mandatory
- Increase Chancellor's fund support to departments to offset childbearing leave
- Create new campus-level staff position to facilitate family-friendly culture through communications/publicity

<https://senate.ucsf.edu/sites/default/files/2017-10/eqop-3FI-Final-Report.pdf>

# Proposed solutions

# JAMA IM Women Physician Leaders Project

- Mentorship in isolation
- Compile collective wisdom
- Learn from “positive deviants”





# Women leaders in medicine: positive deviants

- Katrina Armstrong, MD: Chair, Department of Medicine, MGH
- Jeanine Wiener-Kronish, MD: Chief, Anesthesia and Critical Care, MGH
- Nancy Andrews, MD, PhD: Dean and Vice Chancellor, Duke
- Barbara Atkinson, MD: Dean, UNLV
- LouAnn Woodward, MD: Vice Chancellor, University of Mississippi
- Adrienne Green, MD: Chief Medical Officer and VP for Patient Safety, UCSF
- Deborah German, MD: Dean, Univ. of Central Florida
- Vivian Lee, MD PhD MBA: Former Dean and VP for Health Sciences, Univ. of Utah
- Yvonne Maldonado, MD: Assoc. Dean for Faculty Development & Diversity, Stanford



## Structural interventions: temporal flexibility

We are trying to really focus on how we can support doctors to be as good as possible-- to be present for a patient by providing support in other areas of our lives. Virtual scribes who write out your note for you and then send it to you to edit. Other experiments include that when faculty go out on parental leave, we're providing techs so that their experiments don't shut down. We want to enable our young faculty to have a rich and rewarding family life.

**Katrina Armstrong, MD**

Chief Executive Officer,  
Columbia University Irving Medical Center





## Structural interventions: tenure clock

I did take advantage of tenure clock. I was able to add an extra 2 years. It made it so I could spend more time with my kids. Juggling it with a family was hard. It gave me time to get more grants and papers, so that the promotion packages went through more easily.

**Yvonne Maldonado, MD**

Senior Associate Dean for Faculty Development & Diversity,  
Stanford University





## Structural interventions: change the structure and timing of training

The biggest issue fundamentally is that the way in which our whole system is structured is predicated on assumptions. The fact that we have people go through a prolonged training period and then you start your life in your early- to mid-30s, and then you start as an assistant professor. Your reproductive period is in exactly that period. The whole thing is set up for a guy with a spouse at home raising kids. There are a lot of inherent inconsistencies in what we want people to do and what we reward.

**Vivian Lee, MD, PhD, MBA**

Former Dean and VP for Health Sciences,  
University of Utah





## Individual interventions: practice sponsorship

Because of socialization that women may be more likely to opt out when things aren't going well, with confrontation, when they're facing inequities and they recognize them. What I can do that is most helpful is not only to create opportunities and advocate, sponsor them for important committees, big prizes, national leadership roles, but to help them be resilient and persistent. Try to stay in the game and see a future in academic medicine even when times are tough.

**Nancy Andrews, MD, PhD**

Executive Vice President and Chief Scientific Officer,  
Boston Children's Hospital



# Gender disparities: proposed solutions

## Structural interventions

- **Hiring, promotion and wage transparency**
- Affordable child care
- **Mandatory paid leave**
- **Temporal flexibility**
- **Tenure clock**

## Educational interventions

- **Leadership training**
- **Negotiation skills training**
- Unconscious bias training
- **Change the structure and timing of training**

## Individual interventions

- **Sponsorship**
- **Community-building**
- **Allyship**



*"Skip to the part where the princess climbs  
to the top of the corporate ladder."*