

Pathology as a Profession: Does Gender Matter?



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Agenda

- * **Discuss workforce issues in medicine and pathology**
- * **Review the data**
- * **Gender and diversity as an opportunity to expand the pathology workforce**

Physician Shortage: Myth or Reality?

Facts

- * ACA results in an additional 30M new patients with insurance seeking healthcare
- * AAMC and professional societies report major physician shortages
- * Population demographics and healthcare access especially important in the definition of a physician shortage
- * Pushback from Congress and others due to:
 - * Cost of action
 - * Socio- political factors opposing ACA
 - * Limited data
 - * Politics

AAMC Study on Physician Workforce

- * By 2025, demand will exceed supply by 46,000 to 90,000 physicians
- * Shortages by specialty group
 - * Primary care 12,500 – 31,100
 - * Specialty docs 28,200-63,700
- * Pipeline to become physician takes 10 years, hence, difficult to remediate short term

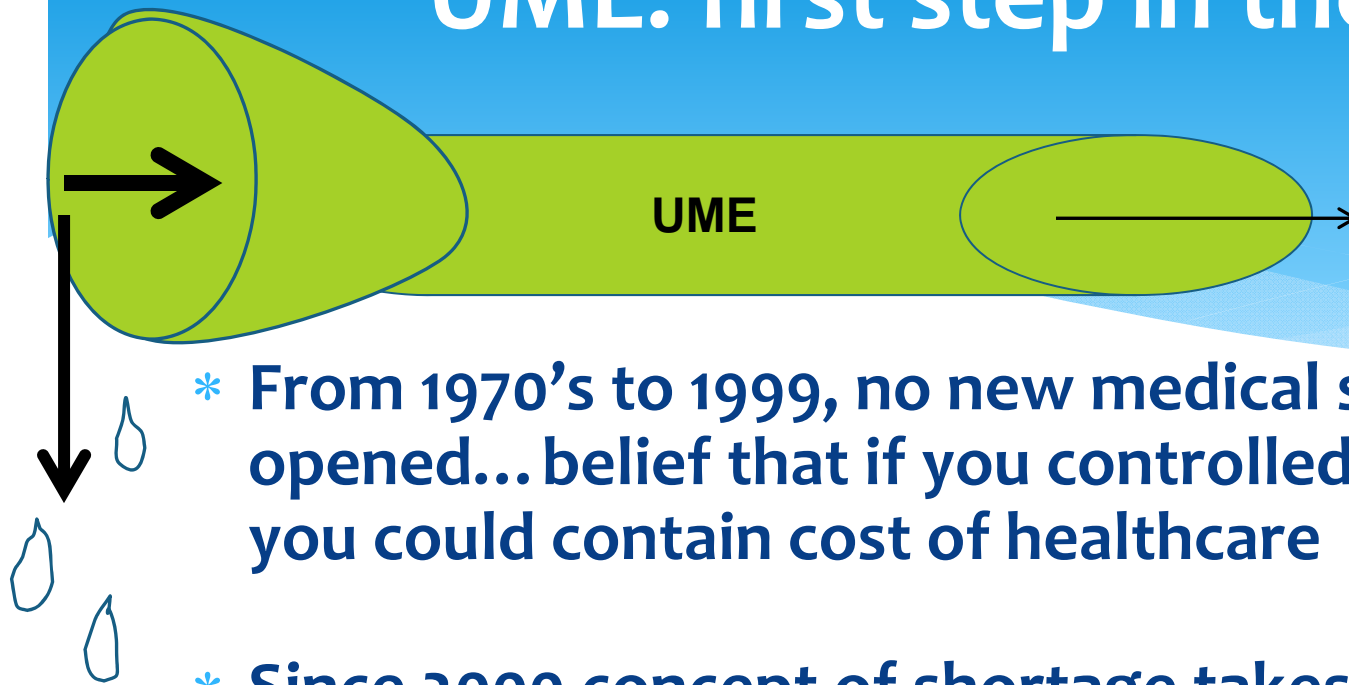
The Complexities of Physician Supply and Demand: Projections from 2013-2015 IHS Inc, Commissioned by the AAMC

“Future Essential” Stewardship Priorities for Medicine

**Perspective from CEOs of BJC HealthCare, Duke UMC, Henry Ford HS, Partners HCS, UCLS HS*

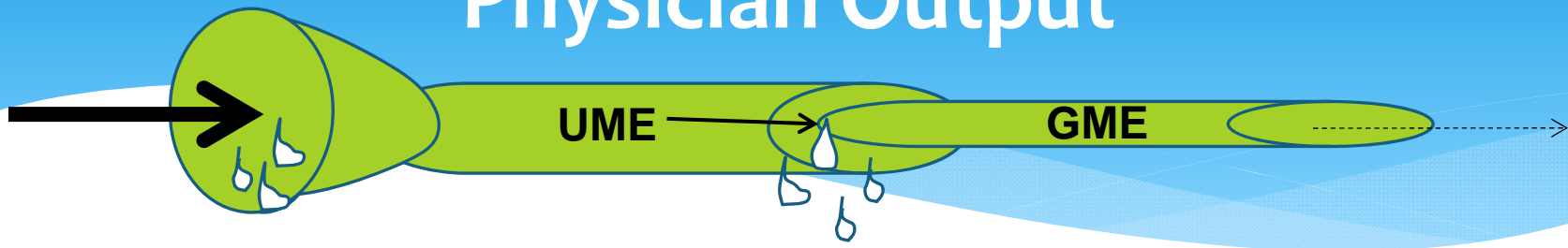
- * **Adaptation**
- * **New and innovative models of care**
- * **Re-engineering education programs**
- * **Streamlining the bench-to-bedside translation of research**
- * **Diverse and well-coordinated health workforce**
- * **Increase collaboration of stakeholders**
- * **Continuously learning and improving health system**
- * **Operate at the frontier of biomedical science**
- * **Strengthen workforce culture, competence and capacity**
- * **Build partnerships and leadership**

UME: first step in the pipeline



- * From 1970's to 1999, no new medical schools were opened... belief that if you controlled number of docs you could contain cost of healthcare
- * Since 2000 concept of shortage takes hold
- * AAMC seeks 30% expansion of UME positions by 2018
 - * Expansion of enrollment allopathic system
 - * New allopathic schools opening
 - * Osteopathic medicine explodes
- * 2014-15
 - * 85K students (~27K PGY1) allopathic medical schools
 - * 24,600 at osteopathic programs

Leaky and Constricted Pipeline Chokes Physician Output



- * **GME positions capped by Medicare since 1997**
- * **IOM Report 2015 calls for geographic and specialty redistribution and reformation of GME. It also calls into question issue of major shortages due to lack of data**
- * **US House Ways and Means, Energy and Commerce Committees requests that GAO conduct an evaluation of the GME system *“Our concern is that, like most federal programs, duplication, overlap or waste is preventing our dollars from being spent efficiently and effectively”***
- * **Veterans Access, Choice and Accountability Act of 2014 creates 1,500 new GME positions over 5 years**

Pathology as a Profession: Our Workforce is in Decline

- * **CAP identified active pathologist FTE of 17,911 in 2010 (down from ~19,000) and predicts active pathologist workforce may bottom out as low as 14,050¹**
- * **AMA data also shows a sharp decline of active pathologists to 13,710 in Dec. 2013 ²**

¹Robboy et al. Pathologist Workforce in the US: Arch Pathol Lab Med 2013

²AMA Physician Masterfile, December 2013

Pathology Workforce, continued

- * **AMA database**
 - * Pathologists have largest drop in practitioners from 2008 to 2013 (10.4 %) ¹
 - * Pathologists second oldest in age of all specialties (61% at or over age 55) ¹
- * Demographics for active pathologists show static gender balance, ~35% women ¹
- * Pathology has been reclassified by HRSA as shortage subspecialty

¹AMA Physician Masterfile, December 2013

Pathology Training Issues Exacerbate Shortage

- * **First major decline tied to shift to 5 years from 4, reducing interest**
- * **Number of GME positions in decline**
 - * **Reallocation of funds to other specialties**
 - * **Reduction of positions, closing programs or reducing numbers**
 - * **Unfilled positions**
- * **Fellowships have become the norm... delaying entry of new pathologists**

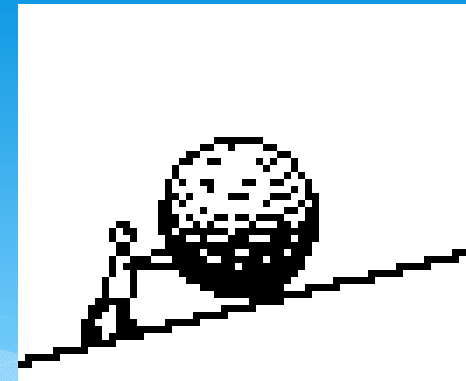
Gender Issues:

**Contribute to Our Workforce
Problem**

Gender, Cultural and Political Issues are Pervasive in US

- * Of 128 countries worldwide, 30 exceed US in advancing the economic success of women
- * Of the 128 countries, 17 surpass the US in creating conditions for women to succeed
- * Income inequality and Title IX issues remain a potent source of dissatisfaction

Women in STEM:



- * Women are under-represented in science, engineering and medicine.
- * The ‘pipeline’ metaphor wrongly suggests that scientific and medical careers of females and minorities progress along at a relatively steady rigid advancement pathway—they do not. ... a leaky pipeline at best

Source: Beyond Bias and Barrier: Fulfilling the Potential of Women in Academic Science and Engineering, National Academy of Sciences, National Academy of Engineering, Institute of Medicine, 2007.

Institute for Women's Policy Research Fact Sheet: Gender Pay Gap by Occupation

- * Occupation with highest earning for women nationwide is physician/surgeon
- * Women physicians make 71% of men's salaries, as compared to pharmacists (83%), software engineers (90%), computer programmers (95%), chief executives (72%), lawyers (77%)
- * Professional gender wage gap also differs by race and ethnicity. (Asian > White > African American > Hispanic/Latino)

University Grads Face Pay Gap Issues by Gender

- * **7% pay gap year 1**
- * **12% pay gap after a decade after university graduation (4 year degree) not explainable by college major, occupation, economic sector, hours worked, months unemployed, GPA, age, region, marital status, institutional selectivity**

Women in Medicine has Increased but May be Leveling Off

- * **Women entering medicine have significantly increased in the last 50 years (1964: 7%, 2013: 46%)**
- * **Since 2003 there has been a decline in the percentage of female applicants to medical schools**
- * **Of active physicians, women comprise 32%**

Physician Careers: Understanding the Market Joel Davis VP of Recruitment, Doximity, January 2016

The State of Women in Academic Medicine (AAMC 2013-14)

- * More women are entering and succeeding in the academic medical workforce

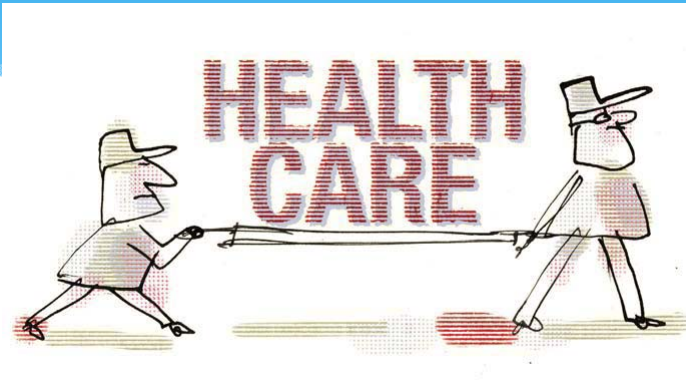
	<u>2003</u>	<u>2013</u>
Instructor	52%	56%
Assistant Professor	37%	44%
Associate Professor	26%	34%
Full Professor	14%	21%

↑ 7%

Top 10 Specialties for Women Residents Entering in 2013-14 (AAMC)

* Internal Medicine	43%	23,081
* Pediatrics	71%	12,074
* Family Medicine	55%	10,208
* Internal Med Sub	37%	11,030
* OBGYN	83%	4,884
* Psychiatry	55%	5,965
* Surgery	38%	7,865
* Anesthesiology	37%	6,156
* Emergency Med	38%	5,777
* Pathology	54%	2,918

Gender Issues Identified in Healthcare System that Influence Patient Care



- * 17th in Health Outcomes
- * 22nd in Gender Equity
- * 28th in Child Well-Being
- * 26th in Infant Mortality
- * 37th in Health Care Systems

US Healthcare on Life Support! Harvard Business Review Oct 2013

The Culture of Medical Schools: the C Change Project

- * National initiative to explore role of gender on the academic medical culture and its leadership
- * Survey of ~5,000 randomly selected faculty from 26 US Schools of Academic Medicine
- * Identification of female to male differences and similarities in their perceptions of key areas

The National Initiative on Gender, Culture and Leadership in Medicine (C-Change Project), Pololi LH et al. J Gen Int Med 2012

Females and Males Reported Critical Similarities

- * **High levels of personal and professional engagement**
- * **Leadership aspirations**
- * **Feelings of ethical/moral distress related to the workplace**
- * **Perception that the institution is committed to faculty advancement**

Unlike Men, Females Report Significantly Less...

- **Sense of belonging and relationships in the workplace**
- **Self-efficacy for career advancement**
- **Gender equity**
- **Belief that their institutions were making changes to address diversity goals**
- **Belief that their institutions were family-friendly**
- **Congruence between self and institutional values**

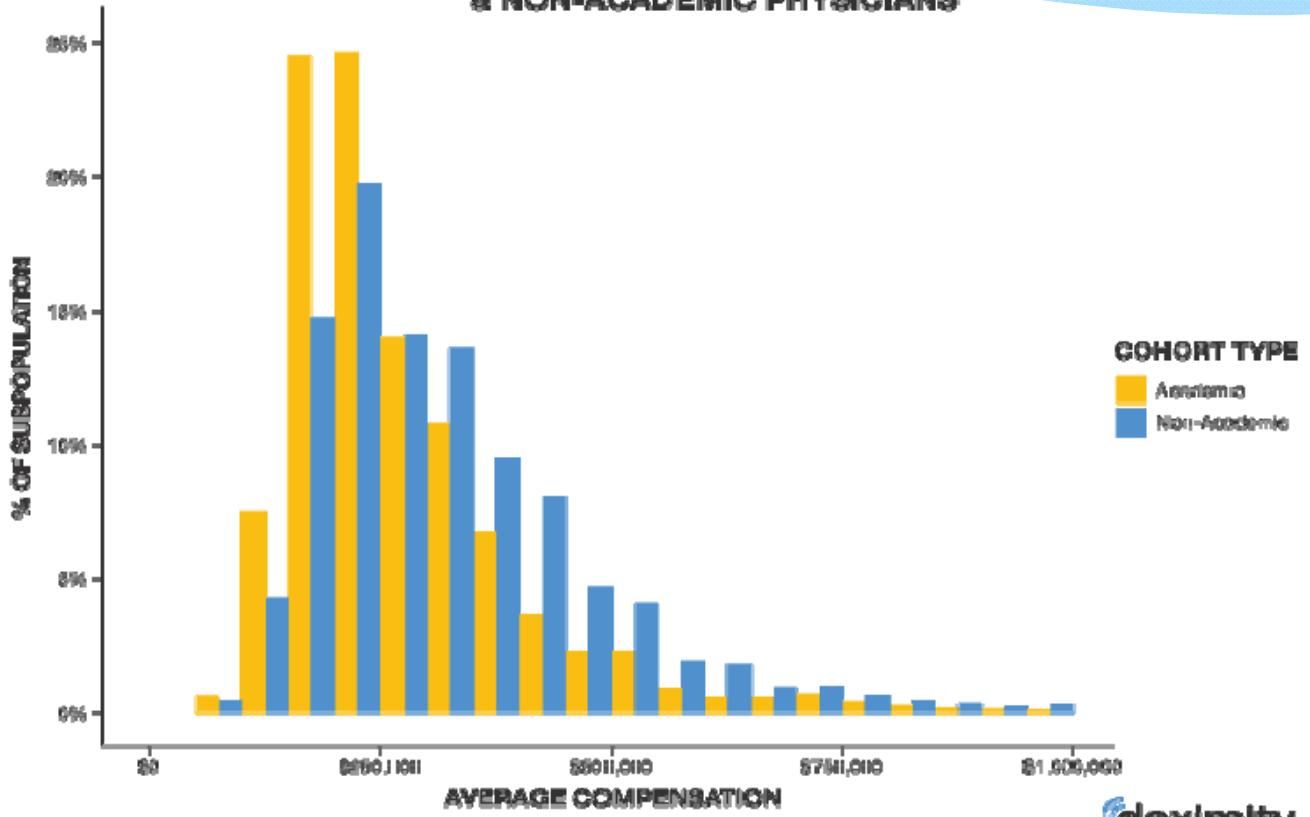
Conclusions of the C-Change Study

- * Female and male medical faculty are equally engaged in their work and share similar aspirations for leadership and success.**
- * Medical schools have failed to create or sustain an environment where women feel fully accepted supported to succeed.**

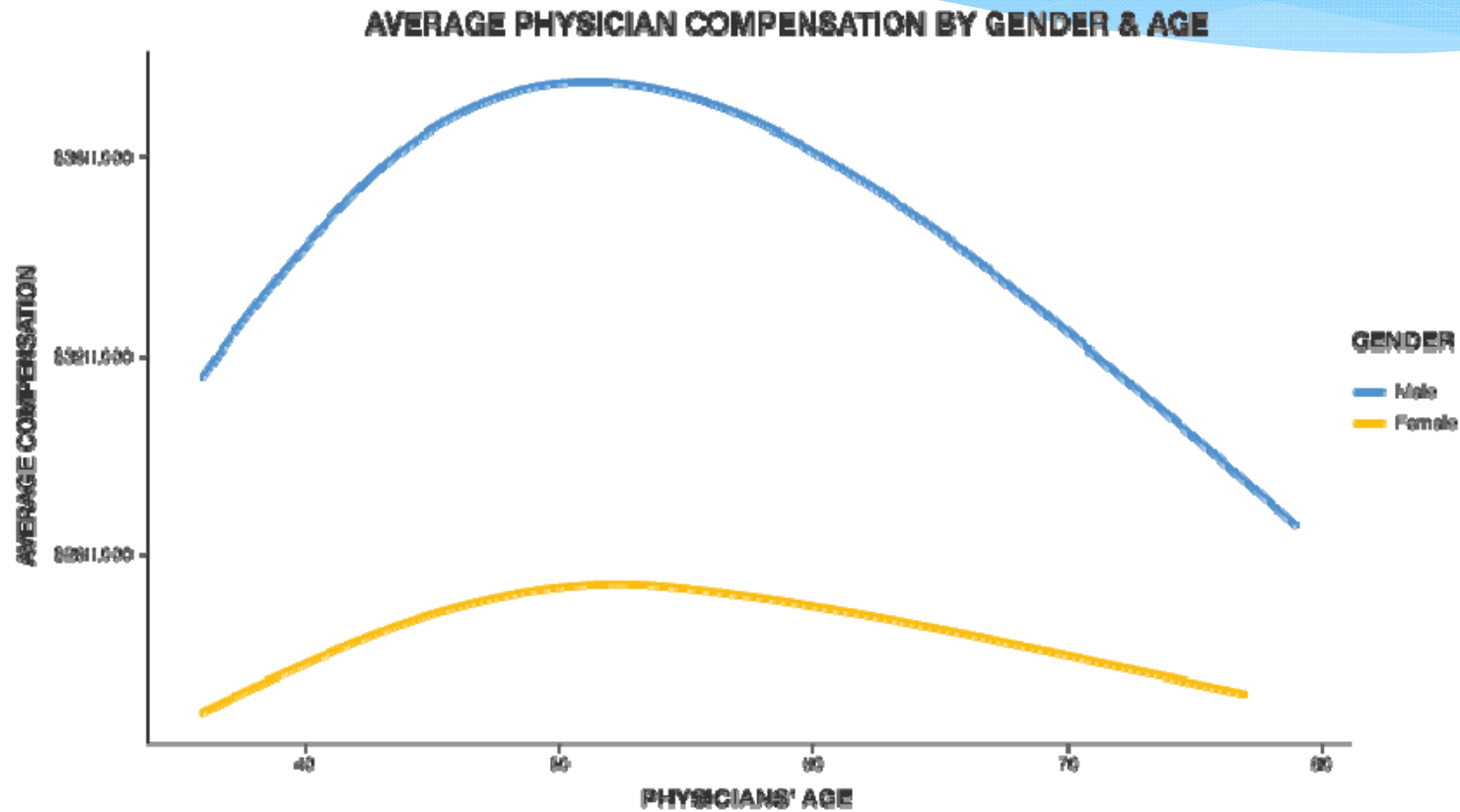
Source: Pololi LH et al. J Gen Int Med 2012

Academic Physicians Make an Average of 13% Less than Non-Academic Docs: but amount varies by specialty and geography

AVERAGE COMPENSATION DENSITIES FOR ACADEMIC & NON-ACADEMIC PHYSICIANS



Pay Gap is Influenced by Physician Age



www.doximity.com/careers

Factors Associated with Gender Bias at AMC/SOM

- * **Salary inequities (average 21%)**
- * **Perceived or actual issues related to familial responsibilities and workplace inflexibility**
- * **Recognition, promotion and leadership inequity...**
- * **Gender discrimination and sexual harassment**
- * **Bias in funding and opportunities in science**

ER and PG Data by Gender: Definition

Earnings Ratio = $\frac{\text{Women's Median Earnings}}{\text{Men's Median Earnings}}$

Pay Gap = $\frac{\text{Men's Median Earnings} - \text{Women's Median Earnings}}{\text{Men's Median Earnings}}$

Gender Based Pay Gap for New Physicians

- * Study of new physicians leaving residency programs in New York State , 1999-2008
- * Male: Female salary gap is increasingly divergent and statistically significant*
 - * 1999 \$ 3,600
 - * 2008 \$16,819
- *Gender Pay Gap not explainable by specialty, practice setting, work hours, or other characteristics

Source: LoSasso AT et al. Health Affairs, 2011

Gender Based Pay Gap for Physicians Over 35 (1987-2010)

Interval	Percent Difference Male:Female adjusted median annual earnings*	Amount
1987-1990	20%	\$33,840
1996-2000	16.3%	\$34,620
2006-2010	25.3%	\$56,019

*Adjusted for practice type, specialty, volume, hours,
insurance mix and other factors

Source: JAMA Internal Medicine, Sept. 2, 2013

Women In Pathology: AMCs

* Residents in Pathology

- * 1999 46% Women
- * 2011 53% Women

* Faculty in Pathology

- * 2005 32% Women
- * 2011 33% Women Clinical
39% Women Research

* Senior Women Faculty in Pathology

- * 2005 (All) 31% Associate Prof 18% Full Prof
- * 2011 (MD) 37% 18%
- (PhD) 41% 23%

Source: AAMC

APC FY15 Survey Shows NO Difference in RVUs by Gender and Rank

Rank	Females		Males	
	RVU	n	RVU	n
Assistant	3,386	194	3,757	158
Associate	3,711	116	3,475	155
Full Prof	2919	104	2,421	213

APC FY15 Survey Data Shows Significant Salary Gaps by Rank and Gender

Rank	Females		ER	PG	Males	
Assistant*	\$181	n=207	91%	8.6%	\$198	n=172
Associate	\$228	128	99	1.3	\$231	168
Full Prof.*	\$254	112	93	7.3	\$274	236

* Statistically Significant Differences

CAP Practice Characteristics Survey 2014

- * **Years in Practice**

- * **Average 17.5 years**
- * **Female 13.3 years**
- * **Male 20.4 years**

- * **FTE Hours worked per week**

- * **Average 48.3**
- * **Female 48.1**
- * **Male 48.4**

Salary differences observed by gender... not reported by CAP

Gender Based Discrimination and Harassment at AMCs

- * **Women who report gender discrimination have lower career satisfaction**
- * **Female faculty 2.5x more likely to perceive gender based discrimination in AMCs**
- * **Rates of perceived discrimination increase with rank, average 47% in Assist Profs up to 70% in Full Prof**
- * **50% of female faculty at AMC report at least one incident of sexual harassment**

Source: Carr PL et al Ann Intern Med 2000

Gender Differences also Notable Amongst Physician Researchers

- * Mean salary women, \$167,669 vs. mean salary for men, \$200,433
- * Male gender was associated with a significantly higher salary, even when adjusted for academic rank, specialty, leadership position, academic productivity, work hours, and seniority
- * On an annual basis, the expected mean salary is higher on the basis of gender alone, by \$12,194 per annum

Source: Gender Differences in the Salaries of Physician Researchers Jagsi R et al, JAMA 2012

Bias, Discrimination and Harassment Are Potent Sources of Job Dissatisfaction and Burnout...

Language

Culture

Ethnicity

Values

Politics

Geography



Race

Religion

Gender

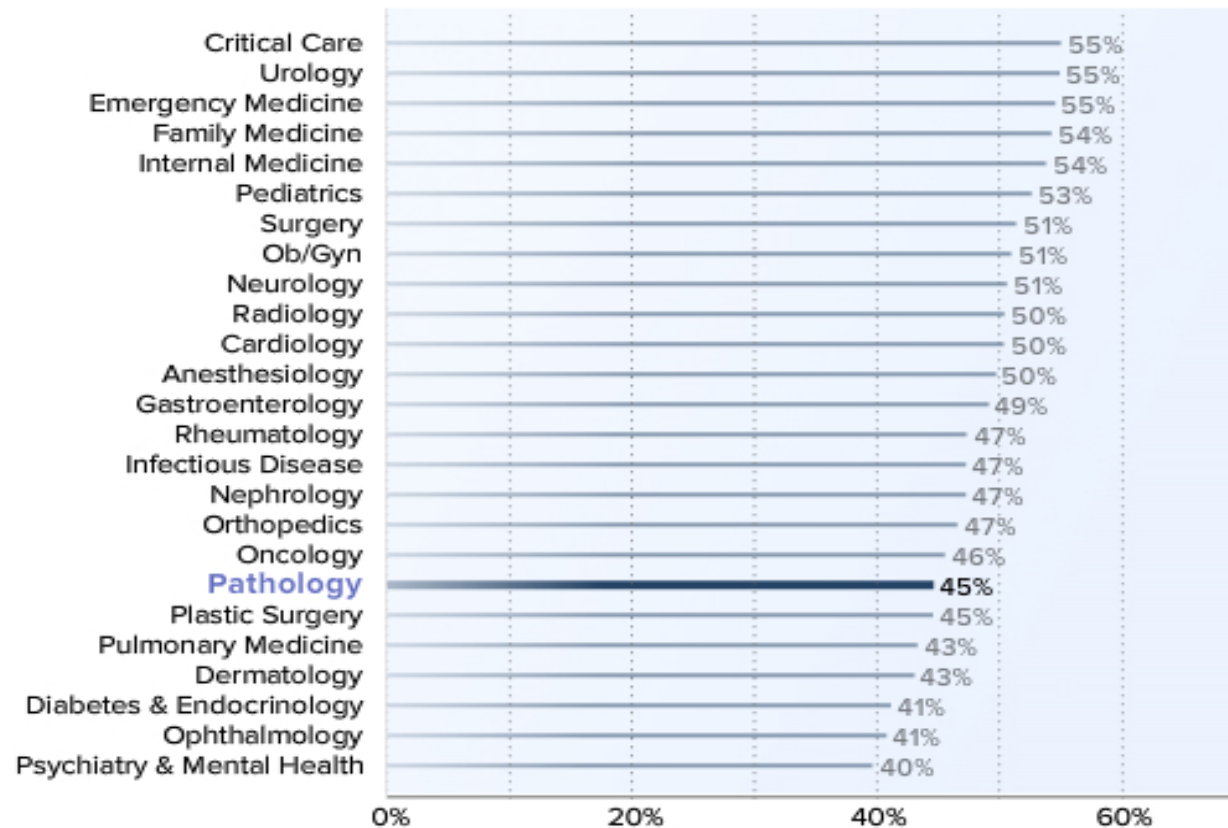
Age

Socioeconomic

Education

Physician Burnout a Critical Issue for Physicians: Pathologists amongst the least affected

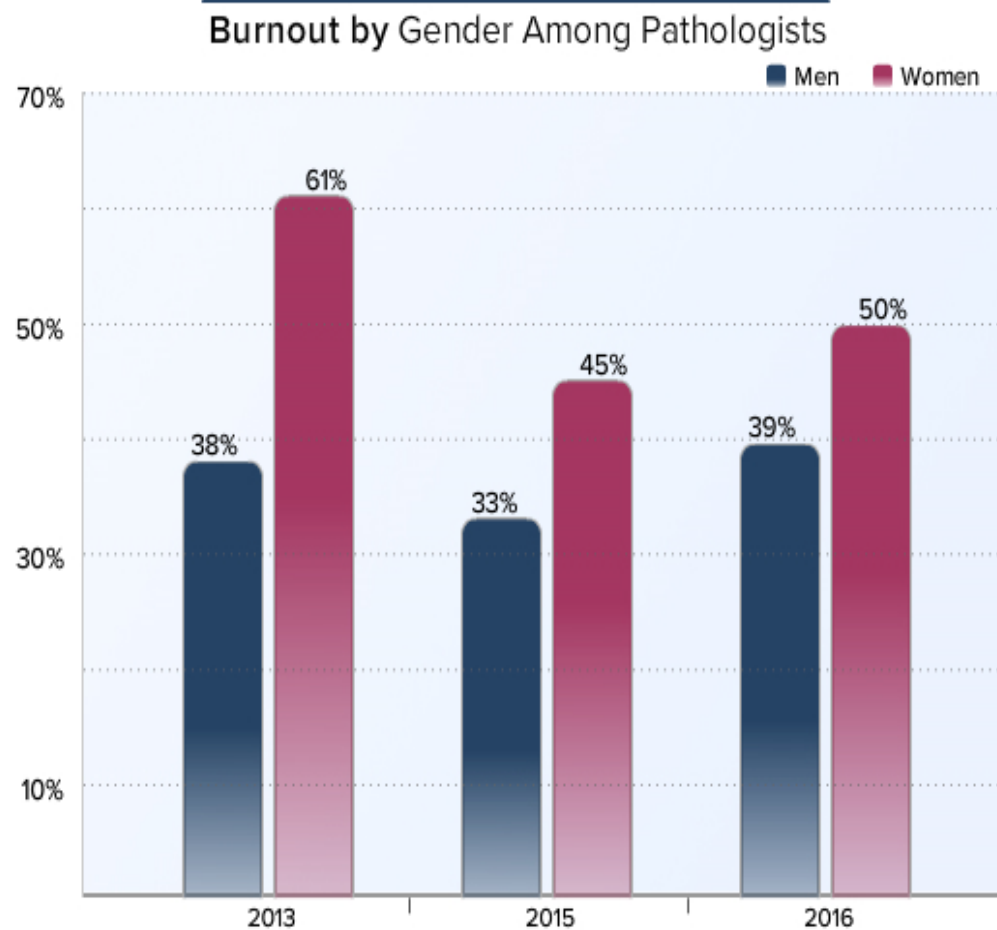
Which Physicians Are Most Burned Out?



Medscape Pathology Lifestyle Report 2016: Bias and Burnout

Burnout Affects Female More Than Male Pathologists

Medscape Pathology Lifestyle Report 2016: Bias and Burnout



Unconscious Bias

- * **Microinequities**—Subtle, unconscious messages that disrespect, devalue, discourage, marginalize including limited or differential collegiality, mentoring and support
- * **Microaggression**—Verbal or behavioral actions (passive or active) and environmental/cultural conditions that convey impressions of hostility, derogatory meaning or differential value

Organizational Awareness

- * **Bias extends far beyond gender...**
- * **Gather and share data, make diversity and inclusion an organizational goal**
- * **Benchmark to others via AAMC, etc.**
- * **Respond to negative data with plan to remediate. Don't let issues fester.**

Mentoring and Role Models are a Must to Reduce Gender Bias

- * Senior mentors and role models have a positive influence on the career advancement of junior professionals...
- * Multiple mentors are best, including women and men
- * Women in academic medicine with mentors report more career satisfaction, more publications, greater time spent on research activities

Levinson et al. Mentors and role models for women in academic medicine. WJM 154, 1991

Personal Steps to Reduce the Impact of Bias

- * **Speak up when inequities observed**
- * **Provide feedback to others if bias perceived**
- * **Ask for feedback, are you contributing?**
- * **Support meaningful audits, use data to determine if pay gap, work gap, etc. exists**

Individual Awareness and Role in Gender Equity

**Take the survey, compare yourself to
>83,000 other participants**

<https://implicit.harvard.edu/implicit/selectatest.html>

Scientific reports of the IATD effect Greenwald, Nosek and Banaji 2003 and Nosek, Greenwalk and Banaji 2006

In Summary

- * **Gender is a potent issue in America, in medical academia and in our healthcare system... it affects all specialties of physicians including pathologists**
- * **Pathology may have less gender bias, particularly in salaries, than many specialties but it salary gaps do exist**
- * **Gender issues are the tip of the iceberg... other forms of inequities and bias reduce workforce satisfaction, recruitment, retention, etc.**
- * **Diversity matters... and will be required to reinvigorate the specialty of pathology**