American Women in Medicine

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Acknowledgement: American Medical Women’s Association (AMWA)
Eliza Lo Chin, MD, MPH, FACP, Executive Director
# Past, Present, and Future

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<th>Historical Perspectives</th>
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<td>Initiatives and Interventions</td>
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Women Healers, Midwives, Doctresses

In his 1884 book “A FAIR CHANCE FOR GIRLS” Harvard Professor Edward Clarke MD argued that:

Girls would not be able to withstand “the intellectual demands traditionally placed on boys”

Imposing such demands on girls during puberty leads to “physiological disasters … nervous collapse and sterility”

Women who pursued higher education would develop “monstrous brains and puny bodies … flowing thought and constipated bowels”
Dr. Elizabeth Blackwell (1821-1910)

1847: First U.S. woman to enter a U.S. medical school

Received a single letter of acceptance from Geneva Medical College, NY Syracuse/SUNY

“...wishing you success in your undertaking which some may deem bold in the present state of society.”

Graduated in 1849, top of her class
“When I was born, the door that separates the sexes had opened scarcely more than a crack. And it has been my privilege, my pain, and my pleasure to pound on that door, strain at its hinges, and finally to see it, although not wide open, stand ajar.”
Dr. Emily Dunning Barringer (1877-1961)

NY’s First Woman Ambulance Surgeon
Helped women physicians achieve commissioned status in the military during World War II

1952 docudrama telling her story
The First Women Medical Colleges

- New England Female Medical College (1848-1874)
  - Later merged with Boston University School of Medicine
- Woman’s Medical College of Pennsylvania (1850-1970)
  - Later became Medical College of Pennsylvania

After the 1910 Flexner Report, many female medical colleges closed or merged with other schools.
Percentage of Women Entering Medical School

- 1965: 9%
- 1975: 24%
- 1985: 34%
- 1995: 43%
- 2005: 49%
- 2015: 48%
- 2017: 51%

34% Women Physicians

Women & the National Institutes of Health

1969: Federal Women’s Program in each Government Agency
   - Integrated into the Equal Employment Opportunity program
   - Eventually became the Office of Equity, Diversity and Inclusion

1974: Ruth Kirschstein MD, first Director of an NIH Institute NIGMS

1990: Office of Research on Women’s Health (ORWH) established

1991: Bernadine Healy MD, first and only female NIH Director

2007: NIH Working Group on Women in Biomedical Careers

2019: Trans-NIH Strategic Plan for Women’s Health Research

Plank-Bazinet et al. Programmatic efforts at the NIH to promote and support the careers of women in biomedical science. Acad Med 91:1057-1064, 2016
NIH Office of Research on Women’s Health

1992: Supplement research funds for career re-entry

1999: Building Interdisciplinary Research Careers in Women’s Health (BIRCWH) program

77 grants, 41 institutions supporting over 613 junior faculty

2002: Specialized Centers of Research (SCORs) on Sex Differences

2012: Janine Clayton MD became Director of ORWH

Vivian Pinn, MD
Inaugural Director (1991-2011)

First 335 Scholars completed

<table>
<thead>
<tr>
<th></th>
<th>MEN (69)</th>
<th>WOMEN (266)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied for NIH grant</td>
<td>74%</td>
<td>81%</td>
</tr>
<tr>
<td>Received an NIH grant</td>
<td>53%</td>
<td>66%</td>
</tr>
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</table>

Simplified View of the Research Career Path

<table>
<thead>
<tr>
<th>CLINICAL &amp; RESEARCH TRAINING</th>
<th>CAREER AWARD</th>
<th>INDEPENDENT INVESTIGATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>resident/fellow</td>
<td>e.g. K23 or equivalent</td>
<td>(funded research) e.g. RO1 grant</td>
</tr>
</tbody>
</table>

MENTOR | RESEARCH PROJECT | FUNDING | PUBLICATIONS
------- | -----------------|---------|-----------------
sponsor | protected time, productivity | # grants/type | # of pubs, impact
NIH: National Library of Medicine

Changing the Face of Medicine

2002-2005 Exhibition Display Celebrating American Women Physicians

2003-2012 Traveling Exhibition free to libraries nationwide

Now an online interactive exhibit at: https://cfmedicine.nlm.nih.gov/
ACP History: The Past 100 years
First Women Fellows, Masters, Leaders

1920: Convocation included 3 women physicians as ACP Fellows
1972: First woman inducted as an ACP Master, Helen Taussig, MD, MACP
1985: First woman ACP Governor, Linda Clever, MD, MACP
1996: First woman ACP President, Christine Cassel, MD, MACP
2016: First woman CEO/Executive VP, Darilyn Moyer, MD, FACP
2018: First year that both the CEO/Executive VP (Darilyn Moyer MD) and the ACP President (Ana María López, MD, FACP) are women physicians
21st Century: The Current Landscape

- The Numbers
- Equity and Bias
- Why It Matters
- Lessons Learned
- Initiatives & Interventions
- Resources
What Percentage of Faculty are Women?
The evidence for a “leaky pipeline” in Academic Medicine

2017: American Association of Medical Colleges (AAMC)

- 58% of Instructors
- 46% of Assistant Professors
- 37% of Associate Professors
- 24% of Full Professors
- 17% of Department Chairs
- 16% of Deans

https://www.aamc.org/data/facultyroster/reports/486050/usmsf17.html
### Percent of Physicians Who are Women (2015)

<table>
<thead>
<tr>
<th>AAMC Workforce Report</th>
<th>% of Trainees who are Women</th>
<th>% of Physicians who are Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstetrics/Gynecology</td>
<td>83%</td>
<td>55%</td>
</tr>
<tr>
<td>Pediatrics</td>
<td>73%</td>
<td>62%</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>43%</td>
<td>37%</td>
</tr>
<tr>
<td>General Surgery</td>
<td>38%</td>
<td>19%</td>
</tr>
<tr>
<td>Orthopedic Surgery</td>
<td>15%</td>
<td>5%</td>
</tr>
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</table>

- The Gender Pay Gap
- “Gendered Differences”
- Gender Bias & Harassment
- Unconscious Bias
“Cross-sectional survey of panelists from the Internal Medicine Insider Research Panel ... comprised of ACP non-student U.S. members. Participants were eligible if they were currently practicing physicians. “

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Survey Respondents</th>
<th>ACP Members</th>
</tr>
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<tbody>
<tr>
<td>Female</td>
<td>34%</td>
<td>30%</td>
</tr>
<tr>
<td>White</td>
<td>58%</td>
<td>63%</td>
</tr>
<tr>
<td>Specialty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General internal medicine</td>
<td>55%</td>
<td>54%</td>
</tr>
<tr>
<td>Hospital medicine</td>
<td>17%</td>
<td>12%</td>
</tr>
<tr>
<td>Subspeciality</td>
<td>28%</td>
<td>34%</td>
</tr>
</tbody>
</table>

441 respondents (survey mailed 12/2017)

Income differences were examined using data from 374 full-time physicians

SEE FULL PRESENTATION SLIDES FROM AUTHORS, AVAILABLE AT: https://www.acponline.org/advocacy/where-we-stand/women-in-medicine
“Overall, the median annual salary was $250,000 for men and $200,000 for women, indicating a $50,000 differential. In other words, women earned 80 cents for every dollar earned by men.”

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Women (n = 120)</th>
<th>Men (n = 254)</th>
</tr>
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<tbody>
<tr>
<td><strong>Median annual income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(IQR), $</td>
<td>$200,000 (168,500 – 247,500)</td>
<td>$250,000 (200,000 – 300,000)</td>
</tr>
<tr>
<td><strong>Specialty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General internal medicine</td>
<td>62%</td>
<td>48%</td>
</tr>
<tr>
<td>Median salary (IQR), $</td>
<td>$191,000 (150,000 – 225,000)</td>
<td>$220,000 (180,000 – 255,000)</td>
</tr>
<tr>
<td>Hospital medicine</td>
<td>19%</td>
<td>23%</td>
</tr>
<tr>
<td>Median salary (IQR), $</td>
<td>$220,000 (184,000 – 250,000)</td>
<td>$258,000 (223,750 – 300,000)</td>
</tr>
<tr>
<td>Subspecialty</td>
<td>19%</td>
<td>30%</td>
</tr>
<tr>
<td>Median salary (IQR), $</td>
<td>$230,000 (175,000 – 260,000)</td>
<td>$275,000 (220,000 – 410,000)</td>
</tr>
</tbody>
</table>

“Specialty: Women earned less than men in every internal medicine specialty, ranging from a differential of $29,000 for internal medicine specialists, to $45,000 for subspecialists.”

TEXT & TABLES FROM AUTHOR SLIDES (USED WITH PERMISSION, COURTESY OF THE AMERICAN COLLEGE OF PHYSICIANS)

SEE FULL PRESENTATION SLIDES FROM AUTHORS, AVAILABLE AT: https://www.acponline.org/advocacy/where-we-stand/women-in-medicine

Read, Butkus, Weissman & Moyer. Letters, Ann Intern Med, 8/7/2018
Gender differences in salary were evident across many other demographic and employment indicators:

- Employment status, Age group, Race,
- Primary professional setting and activity where most time spent
- Married/partnered vs. not married/partnered,
- Spouse employment status, Parent vs. not a parent

**AUTHOR CONCLUSIONS:**

“Female internists earn less than men whether they are generalists, hospitalists, or subspecialists. Women earn less than men regardless of every other demographic and employment characteristic included in this study, with the exception being when women have a spouse who is retired.”

“This study and others have documented that inequities exist even within groups of physicians with similar professional and employment characteristics.”
“The Work Lives of Women Physicians”

<table>
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<th>WOMEN compared to MEN physicians</th>
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<tbody>
<tr>
<td>➢ More likely to report satisfaction with specialty, patients, colleagues</td>
</tr>
<tr>
<td>➢ Have more female patients with complex psychosocial issues</td>
</tr>
<tr>
<td>➢ Greater time pressure in ambulatory setting, less work control</td>
</tr>
<tr>
<td>➢ Mean income earned was $22,000 lower</td>
</tr>
<tr>
<td>➢ Had greater odds of reporting burnout (adjusted OR 1.6)</td>
</tr>
</tbody>
</table>

“Gendered Expectations” and Burnout
Linzer et al. …Do they contribute to high burnout among female physicians? JGIM 33:963, 2017

➢ Female patients seek empathetic listening and longer visits, esp with female physicians
➢ Female physicians have more female patients (including those with psychosocial needs)
➢ Time pressures of work schedule do not accommodate these “gendered differences”
<table>
<thead>
<tr>
<th>GROUP STUDIED</th>
<th>REPORTED FINDINGS</th>
<th>CITATION</th>
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<tr>
<td>NASEM REPORT 2018</td>
<td>Experienced harassment</td>
<td>NASEM Report, 2018</td>
</tr>
<tr>
<td>Univ of Texas System medical students (MS)</td>
<td>Sextist hostility</td>
<td>Dzau &amp; Johnson. NEJM 379:1589, 2018</td>
</tr>
<tr>
<td>Crude behavior</td>
<td>F 45% M 21%</td>
<td></td>
</tr>
<tr>
<td>Crude behavior</td>
<td>F 18% M 10%</td>
<td></td>
</tr>
<tr>
<td>Harassment</td>
<td>MS 50% R 67%</td>
<td></td>
</tr>
<tr>
<td>MS 60% R 63%</td>
<td>F 70% M 22%</td>
<td></td>
</tr>
<tr>
<td>Experienced gender bias</td>
<td>F 66% M 10%</td>
<td></td>
</tr>
<tr>
<td>Experienced harassment</td>
<td>F 30% M 4%</td>
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2018 Consensus Study Report
Sexual Harassment of Women
Climate, Culture, and Consequences in Academic Sciences, Engineering, & Medicine

- **RISK:** male-dominated environment, hierarchical, isolating environments, organizational tolerance
- **CLIMATE:** most important factor in determining whether sexual harassment is likely to occur
- **REPORTED BY:** >50% of women faculty & staff
  20-50% of women students

National Academies of Sciences, Engineering, Medicine (NASEM)
### IMPLICIT BIAS

| The attitudes or stereotypes that affect our understanding, actions, and our decisions in an unconscious manner |

- Implicit associations are harbored in our subconscious
- Associations develop early and over a lifetime through exposure to direct and indirect messages
- Result in feelings and attitudes about others based on characteristics such as race, ethnicity, age, appearance

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*Kirwan Institute for the Study of Race & Ethnicity, 2015*  

## Implicit or Unconscious Bias in Medicine

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<tr>
<th>TRAINING</th>
<th>WORKFORCE</th>
<th>PATIENT CARE</th>
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<tr>
<td>Admission, Selection</td>
<td>Recruitment, Selection, Hiring</td>
<td>Doctor – Patient</td>
</tr>
<tr>
<td>Medical Education</td>
<td>Relationships &amp; Mentoring</td>
<td>Delivery of Care</td>
</tr>
<tr>
<td>Teacher – Student</td>
<td>Advancement, Promotion</td>
<td>Patient Perception</td>
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**PUBLIC DOMAIN: NEWS & MEDIA ▪ LITERATURE ▪ CULTURE**

Ohio State Univ (Kirwan Institute) & AAMC: [https://members.aamc.org/eweb/upload/Unconscious_Bias.pdf](https://members.aamc.org/eweb/upload/Unconscious_Bias.pdf)
# EARLY EXPERIENCES OF WOMEN PHYSICIANS

| Lack of female leadership, opportunity, strong voice | Persevered, but had to self-promote  
Had to pick battles carefully |
|-----------------------------------------------------|------------------------------------------------------------------------------|
| Secrecy of differences, Leaders not accountable     | Inconsistency and inequity traced to time of hire  
Undercurrent of bias continued in the job |
| Forced coping strategies                             | Used humor to cope, or downplayed bias  
Femininity had to be carefully constructed |
| Common reasons cited for leaving the ‘pipeline’      | No role model or mentor; challenge of research funding; poor climate; lack of work-life balance |

*Carr et al. Inadequate progress for women in academic medicine... National Faculty Study J Women’s Health 24(3):190, 2015*  
2018 ACP Position Paper

Gender Equity
Ann Intern Med
268:721, 2018
THE INTERSECTION OF GENDER & MINORITY STATUS

COMPONDED EFFECTS ON:

- COMPENSATION
  white > Hispanic > black (Δ up to 20-30%)

- CAREER OPPORTUNITY
  systematic differences impact career trajectory

- TREATMENT BY PATIENTS, PEERS
  subject to additional biases from multiple angles
Equity Diversity FML Policies
PHYSICIAN WELLNESS

Research Shows:
More empathy
More time with patients

WHY DOES IT MATTER?

ADVANCE Women’s Health RESEARCH

EDUCATORS:
Women’s Health Health Disparities Sex & Gender Medicine
**SPONSORSHIP:** Active support and investment for a person’s advancement to reach their untapped potential

| AAMC: GWIMS | GWIMS Equity Recruitment Toolkit  
| Group on Women in Medicine & Science | Search Committee Diversity Checklist |
| NEJM Catalyst: | ‘No Women Left on the Rim’  
| Lead In | take a seat at table  
| not just “Lean In” | Women of Impact Checklist: Advancing Workplace Equity |
| Institution Change | Leadership accountability & development; Ensure diversity  
| | Implicit bias training; Change culture; Invest resources |
| ACP: Top 10 things you can do for gender equity | Insist on pay equity, advocate for FML; teach negotiation; engage minority women; share/promote/sponsor; measure |

* Travis EL. Academic medicine needs more women leaders. AAMC News, Jan 16, 2018  
American Medical Women’s Association

The Vision and Voice of Women in Medicine since 1915

PRE-MED | MED STUDENT | RESIDENT | PHYSICIAN | RETIRED
Current membership includes women (and men) from all levels of training and career & all fields of medicine

* ACP MEMBERS GET FREE AMWA AFFILIATE MEMBERSHIP

INITIATIVES
Promoting Gender Equity
Tackling Public Health Issues
Advancement of Women in Medicine
Improving Women’s Health

LITERARY AMWA
STUDIO AMWA
FILM
Women in WWI

A Mighty Woman with a Torch, Kathryn Ko MD
ACP advocates on behalf of internists and their patients on a number of timely issues. Learn about where ACP stands on the following areas:

- Affordable Care Act
- Medical Liability Reform
- Workforce
- Medicare Reform
- Medicaid Reform
- Payment/Delivery Reform
- Health Information Technology
- Federal Budget/Appropriations
- Patients Before Paperwork
- Women in Medicine
- Other issues

ACP Report on Differences in Compensation Gap by Gender

REPORT & SLIDES

Women in Medicine Webinars

- Leadership
- Negotiation
- Equity

- AAMC: GWIMS Toolkit
- AMA: Women in Medicine
- AMWA: ACP Affiliate Program
- Association of Women Surgeons
- BWH Mentoring Curriculum & Toolkit
- NEJM Catalyst: Lead In (women/equity)
RECOMMENDATIONS FOR ACHIEVING PHYSICIAN GENDER EQUITY

- **CALL TO ACTION** 2018 ACP Position Paper on Achieving Gender Equity
- ACP Research Report: Compensation Disparities by Gender in IM

WHAT YOU CAN DO TO IMPACT GENDER EQUITY (Top 10 Things)

IMPROVING HEALTH POLICIES TO BETTER SUPPORT WOMEN

- **CALL TO ACTION** 2018 ACP Position Paper on Women’s Health Policy
Celebrating 70 years, 1948-2018
The Permanente Medical Group

1943: First Permanente Health Plan woman physician, Hannah Peters, MD
1948: First woman (and Asian) to become a TPMG Partner, Beatrice Lei, MD
1965: First African American woman physician in TPMG, Ellamae Simmons, MD
1991: First woman TPMG Executive Associate Director, Sharon Levine, MD
2017: First TPMG Women in Leadership Conference (over 1000 attendees)
References and Resources

The American College of Physicians (Women in Medicine)
The American Medical Women’s Association
The American Association of Medical Colleges (Reports, GWIMS)
The American Medical Association (Women Physician’s Section)
National Academy of Science, Engineering & Medicine (2018 Report)
National Library of Medicine (Changing the Face of Medicine)
Office of Research on Women’s Health, National Institutes of Health
Kirwan Institute for the Study of Race and Ethnicity
Kaiser Permanente – A History of Total Health