Women In Medicine: 
As Yet An Unfinished Story

OUTLINE

• Snapshot of academic women and medical leadership by gender
• Near parity in number belies continued gaps
• Recommendations for women and their institutions

Disclaimer

NEITHER THE PUBLISHER NOR THE AUTHORS ASSUME ANY LIABILITY FOR ANY INJURY AND OR DAMAGE TO PERSONS OR PROPERTY ARISING FROM THIS WEBSITE AND ITS CONTENT.

Possible explanations:
Draft law changes in 1971 eliminating draft avoidance higher education
Pending ERA legislation
25 new medical schools opened between 1965-1974

The changing representation of men and women in academic medicine. AAMC July 2005
Career Advancement Disparities

- Cohort of men and women faculty at a medical school in the 1980’s
- Surveyed at a mean of 11 years later
  - 59% of women
  - 83% of men
  - Associate or Full Professors
- 5% of women
- 23% of men
  - Full Professors
- Not related to differences in productivity, attrition

Nonnemaker: women physicians in academic medicine: new insights from cohort studies
NEJM 2000

Leadership Roles

- 2007
  - 12% of all academic department chairs vs 6% in 1998
  - 6/126 AMC’s have no women chair
- 2005
  - 7% of Deans of US Medical Schools
- Boards
  - Editorial Board Membership
    - General medical: 21.5%
    - Clinical Speciality: 25%
    - Biomedical Science: 14.5%
  - American Board Anesthesia
    - As of 2007: only 2/62 past directors
  - ACOG
    - 2 Women Past Presidents
Trends in the Academic Workforce of Obstetrics and Gynecology
Rayburn et al; Jan 2010 Green Jl (1)

- Importance of work force studies
  - Planning for academic departments, chairs and deans
  - Information for those planning on entering or changing an academic career
- Projected increase of 30% of # of medical school enrollees by 2013
- Role of part-time faculty

Anesthesia Faculty

2006: 6.5% of all anesthesia faculty were women, 17.7% of them men. 12.7% Anesthesia Chairs were women

Just over 3% difference in 22 years!

Diversity Based on Race, Ethnicity, and Sex Between Academic Orthopaedic Surgery and Other Specialties A Comparative Study; Day, Lage, Ahn. Journal of Bone and Joint Surgery, 2010

<table>
<thead>
<tr>
<th>Surgical residents</th>
<th>2003</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Surgical Residents</td>
<td>23-28%</td>
<td></td>
</tr>
<tr>
<td>All Surgical Faculty</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>% of Assistant Professors</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>% of Associate Professors</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>% of Full Professors</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>% of Depart Chairs</td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% of All EM Faculty</td>
<td>16%</td>
<td>21%</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>% of All EM Residents</td>
<td>27%</td>
<td>35%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Ob GYN Workforce Study (2)
• E-Survey to 125 Academic Ob GYN Chairs with personal follow up with 100% reporting
• 3650 full time faculty
  – 80% MD
  – 12% PhD
  – 8% Other
  – Avg faculty size
    • 1994=24
    • 2008=29

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Faculty per Department, Mean (Median)</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>General obstetrics–gynecology</td>
<td>6.4 (4)</td>
<td>8.9 (6)</td>
<td></td>
</tr>
<tr>
<td>Maternal–fetal medicine</td>
<td>3.3 (3)</td>
<td>2.0 (2)</td>
<td></td>
</tr>
<tr>
<td>Gynecology–oncology</td>
<td>1.9 (1)</td>
<td>1.0 (1)</td>
<td></td>
</tr>
<tr>
<td>Reproductive endocrinology/infertility</td>
<td>2.0 (2)</td>
<td>1.3 (1)</td>
<td></td>
</tr>
<tr>
<td>Female pelvic medicine</td>
<td>0.9 (1)</td>
<td>0.9 (0)</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>1.6 (0)</td>
<td>1.0 (0)</td>
<td></td>
</tr>
</tbody>
</table>

Part Time Faculty in Ob GYN
Rayburn, 2010
• 84% of 125 academic departments have part time faculty
  – Average of total faculty in these 84% who are part time is 21%
  – 23% of women and 16% of men

The Gender Gap in Academic Medicine is now in Leadership Roles
• Various measures of leadership, “power” in academic medicine
  – Chair/Dean positions
  – Editorial boards
  – Publications
  – Officers in national organizations
• Potential lack of momentum after 2000
• Gender gap especially with senior authorship, invited commentaries
• WHY?
  • Limited pool of eligible faculty
  • Senior faculty who do exist may be inundated with academic activities & must be selective
  • Academic women may preferentially select clinician-educator rather than clinician-researcher role

**AAMC Analysis in Brief: June 2008**
The long-term retention & attrition of US Medical School Faculty

Yedidia & Bickle: 3 Important Barriers to Academic Advancement for Women

Shollen, Bland, Finstad and Taylor: Organizational climate and family life: How these factors effect the status of women faculty at one medical school

1. Constraints imposed by traditional sex roles
2. Manifestations of sexism in the medical environment
3. Lack of effective mentors

**Traditional sex roles**
- Faculty survey: Univ of Minnesota
  - Obstacles to career success & satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meetings after 5pm and on weekends</td>
<td>18%</td>
<td>38%</td>
</tr>
<tr>
<td>Conflict between home and work</td>
<td>18%</td>
<td>32%</td>
</tr>
<tr>
<td>Absence of onsite child care/emergency child care</td>
<td>11%</td>
<td>23%</td>
</tr>
<tr>
<td>Worked harder than they believe peers do to be perceived as a legitimate scholar</td>
<td>21%</td>
<td>45%</td>
</tr>
</tbody>
</table>

- Part time work common

**Organizational climate and family life: how these factors affect the status of women at one medical school**
Shollen et al; Acad Medicine 2009

Survey of Faculty at SOM at Univ of Minnesota
Both men and women worked average of 57 hours/week
Impact of gender & parenthood on physician careers: professional and personal situations 7 years after graduation
Buddeberg-Fischer et al, 2010
• Survey in German-speaking Switzerland
• Cohort of medical school graduates
  – Children
    • Same % with children; men have more
    • 96-99% without children are employed
    • 97% of men with children employed
    • 64% of women with children employed
    • Women with children had lowest values with respect to subjectively assessed career-success ratings
    • Doctors with kids showed lower values in terms of career satisfaction
      (Men>women)
  – Women less career oriented; aspire to work/life balance; more inclined to work part time
  – Women higher life satisfaction: friends, leisure, income
  – Women may not place same importance on climbing career ladder, achieving a high income or power/influence

Sexism in the Work Place

Status of Medical Students?
• 7 Types of Gender discrimination/sexual harassment during medical school
• Graduation questionnaire 2001-2 @ 13 US Medical schools
• All types occur in both genders
  – Women encounter such behavior across a broad range of clinical settings (reported by 60%)
  – Men encounter them mostly on Ob GYN (reported by 36%)
• Tolerated because of fear of reprisal if complaints made; tolerances increases over time

• Educational inequalities
  – Most commonly reported by men on Ob GYN
• Stereotypical comments
• Sexual overtures
  – Heterosexual and homosexual
• Offensive, embarrassing or sexually explicit comments
  – Most occurred on surgical services or in OR
• Inappropriate touching
• Sexist comments
• Non-classifiable
**Effect of Female Gender on Clinical Clerkship Experiences**

Interviews with 12 women after first month of first rotation
1. Women often defaulted to stereotypical gender roles as they adapted to clinical setting
   - Assisted nurses/support staff; nurtured patients; apologized more; less initiative
2. Male students bonded with attending/residents more; females with nurses/support staff
3. Able to negotiate uncomfortable situations with patients well but not so much with male residents/attendings
4. Low expectations of working with men exceeded; high expectations of working with women staff not met
   - “males push you harder, ask more questions”
   - “expected women attendings to be “warm and fuzzy” and instead found them intimidating, often ignored the students
5. Culture of “guyness”
   - Male attendings who stare at women student’s chests instead of faces
   - “Male banter about masturbation

**IM Residents Perceived Ability to Direct Patient Care: Impact of Gender and Experience**

Bartels et al: 2008

- Patient care now team delivered
- Physicians must be able to assert influence on behavior of team members
  - Typically involves giving directive orders
  - Residency is typically first time to be thrust into directive leadership role in which a doctor must be able to routinely assert their influence

**IM Residents**

- Gendered learning curve that began to shape their self-view
  - Higher workplace expectations of women
  - Requires women to be more serious and prove themselves
  - Women attendings tend not to talk about their personal lives
  - “I just want to make sure I don’t end up looking like one of the female residents who doesn’t know anything and doesn’t have any confidence”

- Study design:
  - IM Residents at single institution with 3 part questionnaire around stress, degree of assertiveness, and perceived individual strengths
- Conclusions
  - When asserting authority in specific clinical settings, years of training more important than gender
  - Females more likely to choose less assertive responses to clinical scenarios
  - Strongest gender differences when examining traits that confer greatest advantage/disadvantage on directing patient care
• 88% of women listed their gender in the top 3 disadvantages; men did so 49% of the time
• Both men and women described males as more often being perceived as authoritative, confident and assertive
• Women described women as reflective and self-conscious
  – “It just didn’t seem right for me to tell people what to do, even if I was asking in a nice way. It seemed like if it was something I could do myself, why would I ask them? But as the year wore on, I started to realize that I had too much to do for my own work”

Tone of Communication
• Both groups noted precarious nature of “tone” of female nurse to female doctor interactions
• Male resident: “I’ve seen men able to say things in just terrible tones but its just accepted. Whereas if a women tried that.....”

IM Residents Unanswered Questions?
• Is reduction in stress with increased years of experience related to greater sense of competence OR have residents fine tuned their behaviors to be effective without suffering negative consequences?
• Do women mitigate the danger of being authoritative by checking in with nursing more often?

Sexism in Clinical Setting
• Cross sectional ED study; Convenience sample of 184 adult, coherent patients
• A trained observer entered the room 5-10 minutes after first doctor say the patient
  – “Has the doctor been in to see you yet?”
• If male doctor: 93% If female doctor: 80%
• If attending: 68% If resident: 90%
• Female and black patients were LESS likely to recognize women physicians
• Female residents LESS likely to recognized as MD’s than men residents
Merely distracting or important?

- Complaints and refusal to pay the bill because “I never saw a doctor, just a nurse”
- Patients may withhold information awaiting the doctor
- Potential lack of confidence in treatment recommendations
- Decrease in overall female job satisfaction

Patient perceptions of emergency physicians. Prince et al
The Journal of Emergency Medicine 2006

Salary Issues

- Univ of Minnesota Faculty Survey
  - 31% of women and 1% of men perceived salary inequity
- University of Arizona Formal Salary Evaluation
  - FY 2000: Women's salary (adjusted for rank, track, specialty, degree, leadership, years in rank) 89.4% that of men
  - FY 2005: now 93.% of mens’
- Gastroenterology
  - Survey of members: Gross salary for women 22% less than men
- 2004 Survey
  - In academics, average difference $11,691/year, increasing with seniority

Research Awards

- 2005: NIH reported that the average $ requested by women was less than men
- Harvard internal pediatric research fund study
  - Women applied later in careers, less $ support requested
  - Women had more mentors who were instructors than men who had more mentors who were higher level

Why the $$$$ Differences?

- Social science literature supports the idea that this variability may be explained by differences in perception, interaction styles, negotiation tactics
- Women may feel more unsure of their work, feel less entitled to payment
- Women tend to be more modest about their achievement, less confident
- Institutional bias
**Why financial disparities?**

- Women less aggressive negotiators
  - Men don’t have to worry about appearing as “too tough”
- Men tend to leave job due to money issues
- Women tend to leave due to personality conflicts or other personal issues

**Faculty Reporting**

- Surveys in late 90’s, early 2000s-
  - Up to 70% of women faculty report gender based discrimination and bias
  - 8/10 surgical female chairs list overt discrimination, gender prejudice and sexual harassment
    - 40% limited their job opportunities due to this
    - 30% stated they strove to be “better” than others to overcome this

**Mentorship**

- Dynamic reciprocal relationship in a work environment between an advanced career incumbent (the mentor) and a beginner (the protégé or mentee) aimed at promoting the development of both.
- Systematic review showed that fewer than 50% of medical students and in some fields fewer than 20% of faculty members have a mentor
- Perception that women have a harder time identifying a mentor than men

**Mentoring Functions**

- Levinson:
  - Teaching
  - Sponsoring
  - Guidance
  - Socialization into profession
  - Provision of counsel and moral support

- Acquire new skills
- Role modeling
- Emotional and psychologic support

Sambunjak, Straus, Marusic: Mentoring in academic medicine: A systematic review JAMA 2006

Bussey-Jones: Repaving the road to academic success: the IMeRGE approach to peer mentoring Acad Med 2006
Mentoring research

• Effect of mentorship on education-based careers
• Effects of strategies to enhance mentorship of women, minorities
• Effects on career development & productivity of formal v informal mentoring, personality, and behavior constraints; multifaceted v single component strategies

Mentoring

• Variety of strategies
  – Assigned senior mentor
  – Matrix or mosaic mentoring
  – Peer mentoring
  – Time assignment for mentors to do this with compensation strategies tied to mentoring roles
  – Training of mentors
• Mentors should be critical thinking partners who can ask great questions, see many sides of complex issues, identify hidden assumptions, offer new lines of sight, challenge and expand mental models

Leadership Traits

• Little variation in social science studies over past 25 years
  – Implicit bias that stereotypic masculine behaviors are required for effective leadership
    • Women—compassionate, yielding, communal, competent
    • Men—agency traits—action oriented, assertive
  – Many studies in many settings
    • Women leaders who violate gender norms may trigger negative reactions
    • Bickel: Our culture tends to allow women and minorities a narrower band of assertive behaviors than white men are allowed—he’s assertive she’s bossy
  – Schein: “think-manager-think-male”
  – Eagley and Krau: role congruency for men in leadership roles

Vertical and Horizontal Segregation

<table>
<thead>
<tr>
<th>Career Choices</th>
<th>Academic Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher paying Surgery, Cardiology</td>
<td>Higher academic rank</td>
</tr>
<tr>
<td>More prestigious</td>
<td>More leadership roles</td>
</tr>
<tr>
<td>Lower paying Primary care, Psych</td>
<td>Lower academic rank</td>
</tr>
<tr>
<td>Less prestigious</td>
<td>Fewer leadership roles</td>
</tr>
</tbody>
</table>

Budderberg-Fischer: 2010

Bickel: role of professional societies in career development in academic medicine. Academic Psych 2007
Establish mentoring program early in medical careers and recognize need for mosaic of mentors throughout one's career.

Increase opportunities for part-time career paths that are valued and continue to allow for career advancement.

Make sure all faculty understand the steps in career advancement, Promotion and Tenure processes.

Salary and resource equity should be responsibilities at chair level, held accountable by deans.

Reassess the promotion and tenure policies that overly value individual accomplishments.

Reframe the “ideal faculty member”—the person who has unrestricted availability to work 60-70 hours per work is neither desirable nor sustainable.

Hold search committees accountable to aggressively explore the increasing pool of qualified women and minority candidates.

Late Bloomer Effect

- “Those involved with the appraisal of women in academic appointments must recognize the period of slower publication and grant acquisition that is associated with child-bearing as acceptable and NOT detrimental to an academic career.
- Women must recognize and accept that career breaks may slow their career progress, though should not halt it completely.

McEwen: Engaging women in academic medicine in the UK: report of a workshop at the Association of Physicians Annual meeting, 2 April 2009

Advice to Women Faculty

- Publish, Publish, Publish
- Think through career goals, paths, resources needed and ask for them
- Reassess goals regularly
- Take advantage of networking opportunities
- Evaluate potential employers policies and behaviors
- Don’t look for innuendo and unfairness but selectively challenge inequalities
- Make the boss look good
- Walk the walk
- Actively engage in significant specialty organizations
- May consider reframe from work/life balance to “dynamic imbalance”

What we can do

- Recommend junior faculty as reviewers for papers
  - Path to external recognition, networks
- Nominate women (and minority) colleagues
- Act as a mentor
- Work within your institution to establish fair policies
- Be intolerant of gender discrimination
- Identify your own biases and correct them
• "there are 10 people who could be doing my job, so I should be grateful and toe the line" versus the Gen X'ers who think "there are 10 jobs I'd be fine with, because my job is only a part of my life, and I'll find another spot if this one doesn't work out."