Attendance Code:

ETAEV6V

e-mail to:

fhseta@mcmaster.ca
Gender Equity in Medicine
Why Should we care?

Dr. Sonia Anand,
McMaster University
Heart and Stroke Chair in population Health Research
Canada Research Chair in Ethnic Diversity and CVD
My motivations

• My mother’s experiences
• Women’s Health Chair (2002-13) and Women’s Health Leadership Summit (s)
• Sunshine list analysis
• Experiences witnessed or received
• 2017 spotlight on gender equity in media
• My daughter and sons’ future
Discussion Points

• 1) Global Gender Gap
• 2) Gender Gap in Universities and Medicine
• 3) Gender Bias: Conscious and Unconscious
• 4) Striving for gender equity in the Department of Medicine
Equity is giving everyone what they need to be successful

Equality is 50/50, akin to Parity
Men, women and work

The gender pay gap

*Women still earn a lot less than men, despite decades of equal-pay laws. Why?*
World Economic Forum Analysis

1) Educational Attainment
2) Health and Survival
3) Economic Participation and Opportunity
4) Political Empowerment

Each sub index scored 0 to 1; 1 = Parity
Total index mean of the sub-indices
Figure 6: Global Gender Gap Index and subindexes evolution, 2006–2017

Source: Global Gender Gap Index 2017.
Note: Covers the 106 countries which have consistently been featured in the Index since 2006.
Workplaces are still out of balance, especially in leadership roles
Canada

SCORE AT GLANCE

Economy
Politics
Health

Iceland

SCORE AT GLANCE

Economy
Politics
Health

Yemen score
average score

score
0.00 = imparity
1.00 = parity

rank out of 144 countries
16
0.769

rank out of 144 countries
1
0.878
Closing the Gender Gap 2017

• Education attainment = Closed!
• Health Outcomes = Closed!
• Economic Parity = only 58% Gap closed + worsened!
• Political leadership = only 25% Gap closed unchanged since last year
Ontario’s Sunshine List Analysis

J.R. Kimber Chair in Investor Protection and Corporate Governance
Prof. Anita Anand U of Toronto
Gender Differential from Sunshine list earners from 2012 to 2016, by sector
(Nominal Mean Income)
Gender Gap in Mean Annual Salary by Public Sector Agency 2016

Gap = 8.5%
Gender Gap in Annual Salary in all Universities and the Big 5

*Big 5: U of T, McMaster, Western, Queens, Ottawa*
McMaster University Faculty Association (MUFA) analysis and findings

• The average annual salary difference was $3,515 higher for males over the two years 2012-13
• After controlling for all other predictors of annual salary in the model (Rank, Faculties, CRC, Tenured, Years on Faculty)
• McMaster then implemented a payout to all MUFA women to compensate for this difference
• Analysis did not include Clinical Faculty
Why should we care?

• The “right thing to do”; gender equality is a human right
• Others think: “this is a women’s issue” – eye roll
• But organizations are changing because:
  ✓ Society is now demanding it
  ✓ Gender diversity improves vision in leadership teams
  ✓ Gender equality increases clients and ROI in business world
  ✓ Military tactical units are changing as improves their mission success
  ✓ Universities are changing with top-down policies because their funders have set gender targets for them because, “allowing self regulation” ≠ gender equality
  ✓ Women physicians have improved patient outcomes (JAMA-IM 2017)
  ✓ In 30 years in a women dominated sector, men will also deserve equity
Global Trends

National Trends

Academic Medicine
Women Graduates from Medical Schools in Canada by decade

Association of Faculties of Medicine of Canada (AFMC)
Proportion of Women by Specialty

Post MD Women

Family Medicine | Medical specialities | Surgical | Lab/Path

Association of Faculties of Medicine of Canada (AFMC)
A Leaky Pipeline in Academic Medicine

It is not that women opt, it appears they are pushed out – the institutional environments are not designed to encourage women in academic medicine

Association of American Medical Colleges (AAMC)

BMC Medicine 2018:16:4
Opportunities/Choices/Biases

- Framing unequal outcomes as the result of individual choices, delays action
- Institutional gender bias hinders women’s progress in academic science
- Mentoring, networking, flex work won’t fix the problem
## Gender bias

<table>
<thead>
<tr>
<th>Explicit bias</th>
<th>vs</th>
<th>Implicit bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the conscious level</td>
<td></td>
<td>Unconscious level</td>
</tr>
<tr>
<td>Attitudes and beliefs that we hold consciously</td>
<td></td>
<td>Judgment / behavior that results from subtle cognitive processes / stereotypes</td>
</tr>
<tr>
<td>Often expressed as a result of a threat</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

https://implicit.harvard.edu/implicit/canada/takeatest.html
Dr. Gabrielle Horne wins $1.4 million lawsuit against Nova Scotia Health Authority

Largest decision ever in Canada for damages to reputation and career

By Stephanie vanKampen, CBC News  Posted: Jun 18, 2016 8:00 AM AT  |  Last Updated: Jun 18, 2016 8:00 AM AT

The seven-member jury deliberated for two days before returning with a verdict. (Robert Short/CBC)
**Explicit Bias:** Harassment in Academic Medicine and Hospital Systems

- **1995:** 52% of US academic medical faculty women reported harassment in their careers compared with 5% of men.
- **2015:** Survey of men and women who held a K award in US academic medical centres;
- **30%** of women reported having personally experienced sexual harassment vs 4% of men; *P < .001*
- Of the women reporting harassment:
  - 40% described severe forms (unwanted sexual advances)
  - 59% perceived a negative effect on confidence in themselves as professionals
  - 47% reported that these experiences negatively affected their career advancement
Behaviors for which medical schools should have zero tolerance include sexual harassment as well as harassment based on ethnic or racial origin, gender identification, or personal beliefs.
Implicit or Unconscious bias

https://implicit.harvard.edu/implicit/canada/takeatest.html
Implicit or Unconscious bias

Stereotypical attitudes:
- Competent female = not nice
- Competent male = ambitious

We all have it – sexist, racist, nationalistic, we don’t point fingers we just must acknowledge that this exists and find work arounds
“If faculty express gender biases, these biases may not be intentional or stem from a conscious desire to impede the progress of women in science. People’s behavior is shaped by implicit or unintended biases, stemming from repeated exposure to pervasive cultural stereotypes that portray women as less competent...”
Unconscious Bias in hiring lab manager

- RCT double blind at Yale
- N=127 review resumes for a lab manager with equal qualifications of men and women
- **Men more likely to be hired by men and by women**
- **Men offered a higher starting salary**
Identical Resumes: Influence of Gender

![Bar chart showing competence, hireability, and mentoring scores for male and female applicants. All P < 0.001.]

![Bar chart showing starting salary for male and female applicants. P < 0.01.]

PNAS 2012
Computer Simulated Model 1% bias favoring men

- [http://doesgenderbiasmatter.com/](http://doesgenderbiasmatter.com/)
Imposter syndrome

What Is Impostor Syndrome?

Can’t take a compliment? Feel like a fake? Convinced you’ll be unmasked at any moment? Welcome to the secret circle of high achievers suffering from Impostor Syndrome. The Savvy Psychologist explains how to recognize it, where it comes from, and has 9 tips on how to combat it

By Savvy Psychologist Ellen Hendriksen on May 27, 2015

Men are more likely to overinflate their abilities and women are more likely to understate their abilities
Department of Medicine by Gender

2017-18
Salary Components

Base Salary

Stipends

AFP Payments
   (Participation + Clinical Repair + Performance payment Fund)

Clinical Billings

Other (HHS etc...)

Data Analyzed
Members by Rank and Gender (overall)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>68</td>
<td>57</td>
</tr>
<tr>
<td>Asst</td>
<td>57</td>
<td>43</td>
</tr>
<tr>
<td>Assoc</td>
<td>68</td>
<td>32</td>
</tr>
<tr>
<td>Full Prof</td>
<td>79</td>
<td>21</td>
</tr>
</tbody>
</table>

N=270 (Overall)  
N=77 (Asst)  
N=117 (Assoc)  
N=76 (Full Prof)
Members by Rank and Gender (clinical: 79%)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Men N</th>
<th>Women N</th>
<th>Overall N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asst</td>
<td>55</td>
<td>45</td>
<td>49</td>
</tr>
<tr>
<td>Assoc</td>
<td>70</td>
<td>30</td>
<td>104</td>
</tr>
<tr>
<td>Full Prof</td>
<td>75</td>
<td>25</td>
<td>61</td>
</tr>
</tbody>
</table>

N=214

Anand April 2018
Proportions of Male vs. Female Professors across Medical Division/Specialty

<table>
<thead>
<tr>
<th>Division/Specialty</th>
<th>Male (percent)</th>
<th>Female (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiology</td>
<td>85</td>
<td>15</td>
</tr>
<tr>
<td>Clin. Immunology</td>
<td>67</td>
<td>33</td>
</tr>
<tr>
<td>Clin. Pharmacology</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Critical care</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Dermatology</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Endocrinology</td>
<td>63</td>
<td>29</td>
</tr>
<tr>
<td>Gastroenterology</td>
<td>67</td>
<td>38</td>
</tr>
<tr>
<td>Geriatrics</td>
<td>85</td>
<td>15</td>
</tr>
<tr>
<td>GIM</td>
<td>50</td>
<td>33</td>
</tr>
<tr>
<td>Hematology</td>
<td>55</td>
<td>29</td>
</tr>
<tr>
<td>Infectious Diseases</td>
<td>50</td>
<td>67</td>
</tr>
<tr>
<td>Nephrology</td>
<td>50</td>
<td>33</td>
</tr>
<tr>
<td>Neurology</td>
<td>73</td>
<td>27</td>
</tr>
<tr>
<td>PM&amp;R</td>
<td>67</td>
<td>33</td>
</tr>
<tr>
<td>Respiratory</td>
<td>64</td>
<td>36</td>
</tr>
<tr>
<td>Rheumatology</td>
<td>68</td>
<td>32</td>
</tr>
<tr>
<td>Overall</td>
<td>80</td>
<td>20</td>
</tr>
</tbody>
</table>

* Female Division Director
Male & Female Professors, by Educator type

- Male:
  - Clinician Educator: 75.5%
  - Research Educator: 24.5%
  - n=184

- Female:
  - Clinician Educator: 84.9%
  - Research Educator: 15.1%
  - n=86

Total: n=270
Research Chairholders

Overall: 84men, 15women
CRC-1: 60men, 40women
CRC-2: 67men, 33women
Endowed RC: 89men, 11women

N=45 Chairs in total
Proportion of type of Chair within Gender categories

- **CRC-1**
- **CRC-2**
- **Endowed**

<table>
<thead>
<tr>
<th>Gender</th>
<th>CRC-1</th>
<th>CRC-2</th>
<th>Endowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>men</td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>women</td>
<td></td>
<td>30</td>
<td>70</td>
</tr>
</tbody>
</table>

- N=38 [33] for men
- N=7  [13] for women

Anand Jan 5, 2017
Division Director/Associate Chair(s)

- Last 10 yrs: Men 73%, Women 27%
- Last 1 year: Men 72%, Women 28%
- Associate Chair: Men 100%, Women 0%
- Dir of Institute or Centre: Men 80%, Women 20%

N=11 Positions in total
N=3
N=10
Educational Contributions: Mirrors
Gender Proportion of Faculty (70:30)

- Positions in undergraduate MD: Men 65, Women 35
- Percent total Education units reported: Men 69, Women 31
- Supervises Grad Students: Men 74, Women 26

Anand Jan 5, 2017
Base Salary and Stipends (Clinical)*

<table>
<thead>
<tr>
<th>Overall Base</th>
<th>Asst.</th>
<th>Assoc.</th>
<th>Full</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>Women</td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>$35,560</td>
<td>$18,130</td>
<td>$27,000</td>
<td>$60,857</td>
</tr>
<tr>
<td>$26,379</td>
<td>$15,601</td>
<td>$23,493</td>
<td>$44,440</td>
</tr>
<tr>
<td>$15,601</td>
<td>$27,000</td>
<td>$44,440</td>
<td>$16 K</td>
</tr>
</tbody>
</table>

* Not including research chairs, HHS transfers or direct salary

Anand April 2018

N=76
N=104
N=49
N=214
Median Educational Hours by Rank and Gender (Reported on Excel Sheet)

Hours: Undergrad MD, Clinical Supervision, Academic Administration, Academic Curriculum, FHS teaching, PA program
Median Research Points by Rank and Gender (Reported on Excel Sheet)


Anand Jan 5, 2017
What are independent predictors of base salary/stipend (Clinical)?

<table>
<thead>
<tr>
<th>Step</th>
<th>Categories</th>
<th>Parameter Estimate</th>
<th>P Value</th>
<th>Full Model P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender (Base: women)</td>
<td>Men</td>
<td>9181 (5,846)</td>
<td>0.12</td>
<td>0.61</td>
</tr>
<tr>
<td>2. Age categories (base &lt; 35 yrs)</td>
<td>Age &gt; 65</td>
<td>52,284 (15,967)</td>
<td>0.001</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>55-65</td>
<td>29,888 (13,266)</td>
<td>0.03</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>45-54</td>
<td>8,985 (12,854)</td>
<td>0.49</td>
<td>0.45</td>
</tr>
<tr>
<td></td>
<td>35-44</td>
<td>6,681 (12,735)</td>
<td>0.60</td>
<td>0.93</td>
</tr>
<tr>
<td>3. Rank (base=Assistant)</td>
<td>Full Prof</td>
<td>37,727 (10,402)</td>
<td>0.0004</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>Assoc Prof</td>
<td>11,571 (7,688)</td>
<td>0.13</td>
<td>0.14</td>
</tr>
<tr>
<td>4. Stream (base=Clinician Educator)</td>
<td>Research educator</td>
<td>19,946 (8,110)</td>
<td>0.01</td>
<td>0.01</td>
</tr>
</tbody>
</table>

R² for full model = 17%; Age contributes 9%; Rank contributes 5%; Stream contributes 2%
Summary

• Ratio of men to women faculty in D.O.M. is 70:30
• Women are more frequent in the Assist/Assoc rank and Gender ratio is most imbalanced in Full Professor rank
• Gender imbalance in proportion of research chairs allotted (84%:15%)
• Slight Gender imbalance in higher level Administrative leadership (73%:27%) in past 10 years
• $9,180 imbalance in base salary/stipends between clinical faculty, driven by the Rank and Stream
• Women faculty report more education hours and research points at the Full Professor level, than did men
Women Faculty Summit: Jan 2018

What works well?

What is sub-optimal?

Possible Solutions

16 women faculty across division and ranks
What structures/processes work well in D.O.M (to advance the careers of women)

- Positive, proactive, productive work environment
- Support from Leadership
- Mentorship (positive male and female mentors, lots of opportunities to receive mentorship, strong female role models)
- Supportive colleagues
- Strong female representation among junior faculty
What is sub-optimal in the D.O.M?

- Not feeling heard or respected (sexist jokes, no mechanism for feedback)
- Bullying by male colleagues (and nothing being done about it)
- Lack of transparency around salaries and stipends
- Differential opportunities for advancement (including not enough women being in leadership positions)
- Negative perception of strong women
- Lack leaders who are aware of gender equity issues
- Slow rate of positive change
Women Faculty Summit: Action Items

1. Create a **Formal position** (Associate Chair) in Gender Equity
2. **Equity and transparency** for base salaries and stipends
   (i.e. Make available medians and ranges by rank and division for Clinician Educator and Clinician Research Stream)
3. Ensure faculty members departmental contributions **justify** their present base salaries
4. **Transparency of new leadership opportunities**, required qualifications and T.O.R should be clearly stated. **Tap women on the shoulder to apply**, and ensure selection committees include women (70:30)
5. Enforce **limited terms for leadership roles** i.e. Division Directors; Associate Chairs
6. **Set Targets**: At a minimum 70%/30% men to women ratio in leadership positions

***Chair and SLT must take action and report progress on the above back to women faculty in approximately 3 months***
Remarkably similar to DOM at U of T

Cardiology: It’s potentially sending the message that it’s not a conducive career for young women, even if that is not the reason, you know, if it has nothing to do with why people do or don’t choose to work in clinically intensive areas. ... Where are all the women with young families? Maybe that is not the place for me, or maybe it’s just not possible.
Athena Scientific Women’s Academic Network (Swan) Charter: STEM

- Absence of diversity at top levels
- High loss rate of women in science

Benefits:

- Changes cultures and attitudes
- Encourages increased transparency

Charter aims to address the “leaky pipeline” of women progressing to senior roles in science by removing obstacles to their advancement
Canada Research Chair’s Program: Four Designated Groups

- 1) Women
- 2) Visible Minorities
- 3) Person with disabilities
- 4) Indigenous Peoples

Definitions equity as the removal of systemic barriers and biases, and the practice of inclusivity, so all individuals have equal access to and benefit from the program.

- Requirement to receive equity certification from a recognized body (e.g. Athena Swan) to be eligible for federal funding

De-biasing minds is hard...De-biasing organizations may be easier

- Simple diversity training to raise awareness doesn’t work (20 RCTs)
- Leadership training, networking impact is uncertain
- Organizational change appears most effective
  (job ads, transparent positions, structured interviews)
Organizational change is the most effective change at bringing gender equity: job ads, transparent positions and salaries, structured interviews, balanced selection committees.
We need Targets and Metrics – How well are we doing?

**SCORE AT GLANCE**

- **Leadership Roles Education/Admin**
  - Endowed Chairs
  - Base Salary and Stipends

- **Leadership Roles Research**

- **Economy**
  - Politics
  - Education

- **Health**

- **Dept. of Medicine score**
  - Yemen score
  - Average score

- **Average score**
Summary

- Striving for Gender Equity (fairness) may eventually bring about Gender Equality
- Gender Parity improves the bottom line in Corporate world and Politics (? Medicine)
- Structural changes are need to plug the leaks in the pipeline in Academic Medicine
- *Unbiased-Merit Based System*
- In 2018 society/constituency demands gender equity – can you see yourself reflected in current leadership?
- Equity is important for all to consider: Inequity for women now but ? For men in the future
What do I have to do with gender equality?

- Gender is about women, right?
- Privilege is invisible to those who have it
- Goal: Make gender visible
Attendance Code:

ETAEV6V

e-mail to:
fhseta@mcmaster.ca
What accounts for the differential in Base Salary/Stipends? (Clinical)

Average of Salary By Age

- Age <35: N=3, P value 0.17
- Age 35-44: N=31 (F) and N=48 (M), P value 0.93
- Age 45-54: N=23, P value 0.085
- Age 55-65: N=9 (F) and N=36 (M), P value 0.91
- Age >65: N=2 (F) and N=11 (M), P value 0.67