Why Diversity Matters in Orthopaedics

- More striking disparity in gender/race
- Field does not reflect our patients
- We are missing out on the best and brightest
- Risk of losing relevance – to prospective surgeons and patients

- Critical assumptions:
  - People have equal rights regardless of differences
  - Applicants who meet/exceed the criteria for selection into Ortho Residency programs are equally recruited and have the potential to become competent Ortho surgeons
    - Board scores, Core Clerkships, Research, Volunteer service, Letters of Ref
### Women Residents in Surgical Specialties

<table>
<thead>
<tr>
<th>U.S. and Canadian Medical School Graduates</th>
<th>Total Active Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men Number</td>
<td>Percent</td>
</tr>
<tr>
<td>3,006</td>
<td>83.6%</td>
</tr>
</tbody>
</table>

#### 2016-2017 Orthopaedic Surgery

*14.7%*

#### %Women in Other Specialties

- Colorectal Surgery – 36.6%
- General Surgery – 34.4%
- Otolaryngology – 34.3%
- Vascular Surgery – 28.3%
- Plastic Surgery – 25.6%
- Urology – 25.3%
- Thoracic Surgery – 20.6%
- Neurosurgery – 16.4%

Wide variation in academic departments of those considered underrepresented

Self fulfilling prophecy
Sex Demographic Data of Ortho Specialty Societies - 2017

Chambers CC, JBJS 2018
If Diversity Matters ……How do we get there?

♦ Define ‘there’…..
♦ KW – when there are no barriers to admission of qualified applicants to residency and to leadership roles

♦ Dilemma:
♦ 1. Recruit more women/URM Culture Change
   • More role models (Can’t be what you can’t see)*
   • Increase the pipeline (Perry Initiative and Nth Dimensions)*
   • Ortho rotations/lectures in medical school

OR

♦ 2. Culture Change Recruit more women/URM
   • RJOS/Gladden societies*
   • ICLs/Symposia/Grand Rounds*
   • Need white men to champion
   • Captive audience for exposure (ASES, COA, etc)
Perry Initiative
Orthopaedic Pipeline Programs

SYMPOSIUM: WOMEN AND UNDERREPRESENTED MINORITIES IN ORTHOPAEDICS

The Perry Initiative's Medical Student Outreach Program Recruits Women Into Orthopaedic Residency

Lisa L. Lattanza MD, Laurie Meszaros-Dearoff PhD, Mary I. O'Connor MD, Amy Ladd MD, Amy Bucha BE, Amy Trastl-Nare PhD, Jenni M. Buckley PhD

Published online: 31 May 2016
© The Association of Bone and Joint Surgeons. 2016

Abstract

Background Orthopaedic surgery lags behind other surgical specialties in terms of gender diversity. The percentage of women entering orthopaedic residency persistently remains at 14% despite near equal ratios of women vs men in medical school classes. This trend has been attributed to negative perceptions among women medical students of workplace culture and lifestyle in orthopaedics as well as lack of exposure, particularly during medical school when most women decide to enter the field. Since 2012, The Perry Initiative, a nonprofit organization that is focused on recruiting and retaining women in orthopaedics, has conducted extracurricular outreach programs for first- and second-year female medical students to provide exposure and mentorship opportunities specific to orthopaedics. This program, called the Medical Student Outreach Program (MSOP), is ongoing at medical centers nationwide and has reached over 30 medical schools in the last five years (2012-2017).

Can a Strategic Pipeline Initiative Increase the Number of Women and Underrepresented Minorities in Orthopaedic Surgery?

Bonnie S. Mason MD, William Ross MD, Gezzer Ortega MD, MPH, Monique C. Chambers MD, MSL, Michael L. Parks MD

Published online: 25 April 2016
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Abstract

Background Women and minorities remain underrepresented in orthopaedic surgery. In an attempt to increase the diversity of those entering the physician workforce, Nth Dimensions implemented a targeted pipeline curriculum that includes the Orthopaedic Summer Internship Program. The program exposes medical students to the specialty of orthopaedic surgery and equips students to be competitive applicants to orthopaedic surgery residency programs. The effect of this program on women and underrepresented minority applicants to orthopaedic residencies is highlighted in this article.
2019-2020 Penn Women Residents/Faculty

Residents
2017: 26%
2018: 31%
2019: 31%
Definitions

- **Explicit Bias**: Reflection of conscious attitudes or set beliefs which people are usually unwilling to change.

- **Implicit (Unconscious) Bias**: Reflection of unconscious attitudes or stereotypes that affect individual decisions and actions.

- **Microaggression**
  - Casual degradation of any marginalized group.
  - Brief everyday exchanges that send denigrating messages to certain individuals because of their group membership — Derald Wing Sue (psychologist).
Implicit (Unconscious) Bias

- Implicit (Unconscious) Bias: Reflection of unconscious attitudes or stereotypes that affect individual decisions and actions.

You are really ‘strong for a girl’.....
Has this happened to you?

Dr. Wilson

Kristy
Implicit Bias in Patient Care

“We’re doing everything we can to make him comfortable, short of dressing up as male doctors.”
Implicit Bias

- Universal
- Compelling body of scientific evidence
- Human survival – identify friend vs foe
- Human mind – quickly/automatically categorize people (provides order)
- Categorization – foundation of stereotypes
- Resistance to change prejudice
  - Despite evidence contrary to views
  - Embrace anecdotal experiences that reinforce bias
Implicit (Unconscious) Bias - Gender

**Examples in Ortho:**

- Avoid ranking residents who might get pregnant
- Different introductions during Grand Rounds for men/women
- Women residents assumed by patients to be nurses
- Persistence of ‘wives events’ at meetings
- Sexist names (sweetie, sugar, honey)
- Resident nights out at strip club/entertainment at meetings
- Golf outings for graduation (without other more inclusive events)
- Being spoken over or talked down to at meetings, in board rooms
- Not having, or being aware of, maternity leave/lactation policies

*Speaker Introductions at Internal Medicine Grand Rounds: Forms of Address Reveal Gender Bias. – J Womens Health 2017*
Prescriptive Gender Norms

- Men = **Agentic** (decisive, competitive, ambitious, independent, willing to take risks)
- Women = **Communal** (nurturing, gentle, supportive, sympathetic, dependent)

- Social penalties for violating norms
  - Assertive women are less well liked
  - Women who reach positions of power/influence
    - ‘style becomes an issue’

- Most effective leadership = **Transformational**
Managing Gender Stereotypes

Threading the needle……..

Penn Medicine
“Women who behave in authoritative ways risk being disliked as insufferable prima donnas, pedantic schoolmarm or witchy women.”

— Joan C. Williams, professor of law, on the “likability trap” that continues to plague powerful women

“It’s not women who are the problem. It’s that we still define leadership in male terms.”

Sylvia Ann Hewlett - economist
Grit/Resilience related to Bias in Orthopaedics

- Potential for Bias is increased in current culture
- Those in the minority are not as advantaged
- Grit/resilience critical for success/staying power
- Grit alone is not enough (change the environment)
Implicit Bias

- Different than conscious intention
- Different than stated values/beliefs
- Reflects a wealth of assumptions about people (based on experiences)
- Predicts nonverbal behavior (+ comments)
- May impact how we see another person
- Downstream effects on decisions

- Key step – individual chooses to explore attitudes toward others
Ladder of Inference

I draw Conclusions

I make Assumptions based on the meanings I added

I add Meanings (cultural and personal)

I select "Data" from what I observe

Observable "data" and experiences (as a video tape recorder might capture it)

The reflexive loop (our beliefs affect what data we select next time)

I adopt Beliefs about the world

I take Actions based on my beliefs

Source: The Fifth Discipline Fieldbook by Peter Senge
https://books.google.com/books?id=thTrQVR8EIC&q=242#v=snippet&q=242&f=false
Ladder of Inference – Ortho Example

- Ortho Residency – 21M/4F
- 1 female resident has 2 young kids
- 8 male residents have young kids
- All residents/faculty are at Dept picnic with families
- You focus preferentially on female resident with 2 kids
- “Woman is likely spending much of her time outside of work caring for children”
- “She must not be spending time preparing for cases or OITE”
- “She must not be as competent as male residents or residents without children”
- “Her OITE scores are probably low”
- Develop belief that women don’t perform as well as men in orthopaedics
- This bias affects how potential female resident candidates are viewed during selection

Allowed us to ignore the facts

Observed facts
Select data
Make Assumption
Conclusion
Form belief
Implicit Bias

- When the author’s gender is known, women are less likely to have their publications accepted (Budden et al. Trends Ecol Evol 2008)
- Women faculty are provided fewer institutional resources and lower pay (Lo Sasso et al Health Affairs 2011, Ash et al Ann intern Med 2004, Tesch et al JAMA 1995)
- Women faculty are more likely to be assigned ‘institutional housekeeping’ duties (DesRoches et al Acad Med 2010, Shollen et al Acad Med 2009)
- Letters of recommendation for women faculty are shorter, have more references to personal life, and contain fewer ‘outstanding’ descriptors (Trix & Psenka Discourse & Soc 2003)
Change the Habit of Gender Stereotype Bias

- What You Don’t Know: The Science of Unconscious Bias – AAMC (video)
- Bias Literacy – learn types of bias in academic settings
  - Expectancy bias
  - Prescriptive gender norms
  - Occupational role congruity
  - Redefining credentials
  - Stereotype priming
  - Stereotype threat
- Overcome bias with evidence-based strategies
  - Stereotype replacement
  - Positive counterstereotype imaging
  - Perspective taking
  - Individuation
  - Increasing opportunities for contact with counterstereotypic exemplars
Positive Data About Women in Medicine

Comparison of Hospital Mortality and Readmission Rates for Medicare Patients Treated by Male vs Female Physicians

Yusuke Tsugawa, MD, MPH, PhD; Anupam B. Jena, MD, PhD; Jose F. Figueroa, MD, MPH; E. John Orav, PhD; Daniel M. Blumenthal, MD, MBA; Ashish K. Jha, MD, MPH

Physician Characteristics Associated With Ordering 4 Low-Value Screening Tests in Primary Care

Zachary Bouck, MPH; Jacob Ferguson; Noah M. Ivers, MD, PhD; Eve A. Kerr, MD, MPH; Kaveh G. Shojania, MD, Min Kim, MSc; Peter Crum, MD, MBA; Cara Penderith, MS; Graham C. Mcready, MSc; Richard H. Glazier, MD; Joshua Tepp, MD; Peter C. Austin, PhD, MSc; Danielle Martin, MD, MPP; Wendy Levinson, MD; R. Sacha Bhatia, MD, MBA

Evidence of the Superiority of Female Doctors

New research estimates that if all physicians were female, 32,000 fewer Americans would die every year.
Minimizing Implicit Bias – What can ‘you’ do?

❖ Self awareness
  • Recognition that bias exists and awareness of your own blind spots and hot buttons (*take the IAT*)

❖ Slow Down
  • We are most prone to bias when work quickly, are stressed or tired

❖ Transparency and Inquiry
  • Make your assumptions, perspective and data clear to yourself and, if appropriate, the other person

❖ MRI - Most Respectful Interpretation, taking the other person’s perspective
  - *From Nancy Rothbard, Professor of Management, Wharton School, Leadership Edge*
Implicit Bias can be Measured

Implicit Association Test

* People favor men, white, youth, physically able
* Men linked with science-women with liberal arts
* Unconscious gender bias found in men and women

https://implicit.harvard.edu/implicit/education.html
Addressing Gender Bias in Ortho: 1 on 1

Women

• Find ways to constructively educate colleagues about disrespectful comments
• Be clear and confident
• Consider humor, don’t lecture or whine

Men

• Don’t be defensive if woman (esp trainee) provides feedback
• Ask about the minority perspective – listen
• Make an effort to change behavior

*There can also be same sex gender bias...
Mentoring Women Ortho in the #MeToo Era

- Fear/concern
  - Women – of harassment
  - Men – of being accused of harassment
- Harder for women to find male mentors
  - Given the #s, women NEED male mentors
- Middle ground between inappropriate and avoiding mentoring
- Reality is complicated and nuanced
How does Bias play out in Orthopaedics?

- **Culture of Ortho (medical student view)**
  - Top women (and some men) students not impressed with locker room culture in OR – **Be mindful/aware**

- **Residency Interviews**
  - Ask questions about agility, decision-making in difficult situations…..not about football

- **Residency Training**
  - Assumption that women aren’t tough or strong enough - **False**

- **Faculty hire**
  - Lack of women - **Include ♀ on search committee/interviews**

- **Promotion and Tenure**
  - Penalty for women who take time to have children or have disproportionate caregiving responsibilities – **Amend policy**

- **Private Practice**
  - Lack of women partners – **Ask why/consider flex policies**
Including Women at the Table Changes the Conversation

13 Men, and No Women, Are Writing New G.O.P. Health Bill in Senate

By ROBERT PEAR  MAY 8, 2017

Michelle Obama: You need women at the decision table

Donald Trump meets 30 men to discuss future of maternity care under new healthcare bill

"Here's the picture of the leaders negotiating away birth control, maternity care and abortion. Notice anything?"
NIH Director Francis Collins: I won’t go on another all-male panel

The “manel” is a longstanding problem for women in STEM — and for science itself.

By Sigal Samuel | Jun 14, 2019, 2:30pm EDT

California Becomes 1st State To Require Women On Corporate Boards

October 1, 2018 - 4:47 PM ET

2019 – “The Year Of the Woman” in Employment Law

By Barbara E. Hoey and Diana R. Hamar on February 21, 2019
Posted in Discrimination, EEOC

Hawaii Joins Salary History Ban Trend

By William J. Simmons, Martha J. Keon and Judy M. Iriye on July 6, 2018

Penn Medicine
Culture Change

- **Structural/Institutional**
  - Policies
    - parental leave, eligibility for leadership roles, academic promotion rules, flexibility, women at table
  - Pay Inequities
  - Traditions
    - ortho organizational leadership, graduation activities, ‘majority culture’
  - Discuss diversity/inclusion – captive audience
  - AAOS – change volunteer structure/bias training/leadership training
Early 1970s – Orchestra Auditions

- Introduction of a screen to ‘blind’ selections to orchestra
- Use of a committee rather than sole evaluator
- Instructed women to remove shoes
- More women advanced through auditions
  - Increased likelihood of ~50%
- Should other opportunities be ‘blinded’?
## AAOS 2018 Work Culture Survey

### Member Group

<table>
<thead>
<tr>
<th>Member Group</th>
<th>Invited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resident</td>
<td>1565</td>
</tr>
<tr>
<td>Candidate Member</td>
<td>646</td>
</tr>
<tr>
<td>Fellow</td>
<td>2937</td>
</tr>
<tr>
<td>Emeritus Fellow</td>
<td>490</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5638</strong></td>
</tr>
</tbody>
</table>

### Survey Data: Career Stage

**Q.6**

<table>
<thead>
<tr>
<th>Career Stage</th>
<th>Responded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residency Training/Fellowship</td>
<td>197</td>
</tr>
<tr>
<td>In Practice 1-5 years</td>
<td>164</td>
</tr>
<tr>
<td>In Practice 6+ years</td>
<td>514</td>
</tr>
<tr>
<td>Retired</td>
<td>45</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>927</strong></td>
</tr>
</tbody>
</table>

### Role

<table>
<thead>
<tr>
<th>Role</th>
<th>Responded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department/Division Head</td>
<td>125</td>
</tr>
<tr>
<td>Trainee Supervisor</td>
<td>55</td>
</tr>
<tr>
<td>Attending Physician/Surgeon</td>
<td>662</td>
</tr>
<tr>
<td>Clinical Team Member</td>
<td>57</td>
</tr>
<tr>
<td>Trainee-Resident Fellow</td>
<td>204</td>
</tr>
<tr>
<td>Other Clinical Role</td>
<td>46</td>
</tr>
<tr>
<td>Non-Clinical Role</td>
<td>52</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>927</strong></td>
</tr>
</tbody>
</table>

### Career Stage Responded Percent

<table>
<thead>
<tr>
<th>Career Stage</th>
<th>Responded</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residency Training/Fellowship</td>
<td>197</td>
<td>21%</td>
</tr>
<tr>
<td>In practice 0-10 years</td>
<td>287</td>
<td>31%</td>
</tr>
<tr>
<td>In practice 11-20 years</td>
<td>188</td>
<td>20%</td>
</tr>
<tr>
<td>In practice 21 or more years</td>
<td>203</td>
<td>22%</td>
</tr>
<tr>
<td>Retired</td>
<td>45</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>927</strong></td>
<td>100%</td>
</tr>
</tbody>
</table>

### Ethnicity Invited*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Invited*</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>311</td>
</tr>
<tr>
<td>Asian</td>
<td>177</td>
</tr>
<tr>
<td>Caucasian</td>
<td>1705</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>296</td>
</tr>
<tr>
<td>Other</td>
<td>83</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>927</strong></td>
</tr>
</tbody>
</table>

* 3,066 invited did not indicate ethnicity.

### Gender Invited

<table>
<thead>
<tr>
<th>Gender</th>
<th>Invited</th>
<th>Responded</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>2322</td>
<td>621</td>
<td>27%</td>
</tr>
<tr>
<td>Male</td>
<td>3316</td>
<td>305</td>
<td>9%</td>
</tr>
</tbody>
</table>
Nearly four in five members surveyed report discrimination in the workplace, with females more likely to do so. Additionally, members age 35-64 are more likely than younger members to report discrimination.

Have you ever been subject to discrimination in the workplace?
(Total, n=611)

- Yes: 79%
- No: 21%

- Female (n=503): 84%
- Male (n=107): 59%
- 25-34 (n=135): 67%
- 35-44 (n=208): 85%
- 45-54 (n=135): 83%
- 55-64 (n=90): 82%
- 65+ (n=43): 72%
- African American...: 87%
- Asian (n=39): 82%
- Caucasian (n=448): 78%
- Hispanic/Latino (n=20): 85%
- Other (n=49): 78%
Over half of members surveyed reported bullying in the workplace, with female members aged 45-54 reporting this more frequently than those aged 35-44.
Close to half of members surveyed have been subject to sexual harassment in the workplace, with females far more likely to respond affirmatively. Additionally, members who are Caucasian or “Other” ethnicities are more likely than African American members to indicate sexual harassment occurred.
Kristy L. Weber, MD, Takes Office
Making history as the first woman president of AAOS

LEARN MORE

Cultural Disconnect
2019 – 2023 Strategic Plan

- New vision for the Academy
- 3 primary goals
- 4 key enablers
  - Advocacy
  - Communications
  - Partnerships
  - Technology

The Trusted Leaders in Musculoskeletal Health

Learn more at AAOS.org/StrategicPlan
AAOS Core Values

Leading to serve
1. We relentlessly focus on enabling our profession to better serve our patients
2. We mentor and support our members to drive excellence in musculoskeletal health
3. We engage members, partners, and patients where they are, and lead them forward
4. We practice transparent decision-making and open communication

Shaping our future
1. We use data and evidence to stay a step ahead
2. We advocate to promote quality musculoskeletal care
3. We proactively embrace disruptors, and develop innovative products and services

Excellence together
1. We empower and seek input from all people, not just the majority
2. We acknowledge unconscious biases, and seek to address barriers to inclusion
3. We collaborate based on mutual respect and trust
(1/2) We’d like to thank our members who respectfully addressed the inappropriate images in the training textbook earlier this year. On behalf of our members, @AAOS1 President, Kristy Weber, MD wrote a letter based on the powerful conversation starters through social media.

The textbook case of sexism in medicine?

In a classic book on orthopaedics, photographs show male doctors examining smiling female patients in see-through underwear...

Figure 2.13 Testing the deltap.  
Figure 2.14 Testing posterior major.


In case you are unaware of the potentially sexually charged atmosphere of an orthopaedic clinic, we point you in the direction of the erotic
1917
Jeannette Rankin – Montana
1st F elected to federal office
128 yrs after 1st US Congress

2019
127 F in US Congress (23.7%)
Final Thoughts - Homework

- Consider another perspective
- Challenge your assumptions
- Practice once each day