Reaching a Critical Mass: A Step-By-Step Guide for Recruiting and Retaining Women in Orthopaedic Surgery

"There's a pure and simple business case for diversity: Companies that are more diverse are more successful." -Mindy Grossman

With the revelation that the optics of a homogenous board room or workplace were bad for business, a majority of large companies have incorporated "diversity and inclusion" efforts into their agenda in the past decade. And beyond the optics, employing a diverse workforce has a clear competitive advantage. So why have businesses struggled to meet these goals?

In orthopaedic surgery, many reasons for a lack of diversity have been heralded—pipeline issues, bias, and lack of advancement opportunities. Luckily, new research is beginning to identify some of the causes and solutions to this timeless problem.

This step-by-step guide was created to provide departments and institutions tangible measures they can take to effectively increase the recruitment and retainment of women in orthopaedic surgery.

Current status

Orthopaedic surgery currently ranks as the least diverse specialty in medicine. Despite the increase in matriculation of women (~50%)[4] and URMs into US medical schools[5,6], orthopaedic surgery has failed to attract that same diversity[7].

This diversity gap only widens as women and URMs progress in their career, receiving lower income, holding less leadership positions, and publishing fewer research papers. A study by Beebe et al. demonstrated a $62k gender income disparity in orthopaedic surgeons in practice >20 years[10] and a Canadian population study revealed hourly earnings for female surgeons were 24% lower than their male counterparts[11]. This is also true for women holding leadership positions—a survey study of 76 ACGME-accredited orthopaedic surgery programs found 100% were led by male chairs and 97% by male residency program directors. Worse yet, 20% of the programs had no female faculty or residents[14].

The dearth of diversity throughout the orthopaedic career pipeline paired with significant disparities in salary, industry and advancement opportunities, and research productivity, make it unsurprising that the specialty has failed to diversify.

Why we care

There are many arguments for a diverse orthopaedic workforce, but plainly, it's a good business decision.

Diversity is good for patients

A diverse workforce would more ethically represent and serve the inherent diverse patient population. Since minority physicians are more likely to work in underserved areas[32,33], increasing the diversity of the orthopaedic workforce has the potential to alleviate some of the many documented disparities in the provision of orthopaedic care[18-25]. Gender and ethnic diversity not only improves access to care, but also increases patient satisfaction[17,26-28]. The social evolution theory argues that patients are more satisfied with the communication with their provider and treatment when they are managed by a physician from their own culture or gender[28,32]. Furthermore, gender concordance between provider and patient impacts communication style. Relationships between female patients and female providers have a longer encounter length and the patient/provider contributions are perceived as more equal[33]. This may explain why Dineen et al. found patients preferred female surgeons at a rate almost three times that of male surgeons[34].

Diversity is good for coworkers
The importance of diversity can be summarized concisely: it makes teams smarter. But why? One interesting study evaluated the impact of bringing newcomers into established four-person groups to solve a problem. The findings were striking—although teams with a newcomer were less confident about the accuracy of their answer, they were more likely to solve the problem correctly. The authors argued simply the presence of a newcomer forced the team to more closely examine the facts and change their behavior[39].

In addition, by breaking up workplace homogeneity, employees are made more aware of their potential biases and more likely to innovate[40,41]. A study evaluating the association between degree of gender diversity in 4,277 company development teams and introduction of new innovative products over two years found companies with more women were significantly more likely to introduce radical new innovations to the marketplace[42]. In other words, creating a more diverse workplace will help to keep your team members' biases in check and make them question their assumptions."

Diversity is good for the bottom line
Patients have better outcomes and the institution is more profitable when the workforce is diverse. Several studies have shown that patients taken care of by women have better outcomes than those who are cared for by men. The patients of female internists die less frequently than those of male internists[45], and the patients of female surgeons have fewer complications than those of male surgeons[46,47].

And to boot, diverse teams and companies are more profitable. A 2018 McKinsey report found that companies in the top quartile for gender and ethnic/cultural diversity on their executive teams were 21% and 33% more likely to experience significant above-average profitability, respectively[41]. Employees recognize this value—a 2016 survey by the Economist found respondents believed diversity and inclusion promote better talent management (71%) and collaboration (64%)[50]. These studies illustrate the business and financial value of diversity.

Diversity Recruitment: A Step-By-Step Guide – Table of Contents

SECTION 1: EDUCATION

- Mandate annual unconscious bias training within the organization
- Implement grand rounds and mandatory educational sessions addressing the diversity gap and its impacts, covering issues like disparity in treatment, screening bias, and mistreatment

SECTION 2: RECRUITMENT AND OUTREACH

- Create early exposure opportunities, e.g., pipeline programs and URM-specific research grants
- Provide early MSK-specific education to undergraduates and medical students

- Increase diversity visibility, e.g. by promoting women and URMs in departmental photos, promotional materials, and patient pamphlets
- Encourage media coverage of research breakthroughs by women and URMs
- Partner with key influencers, diverse networks, and female- and URM-specific conferences to target outreach

SECTION 3: MENTORING

- Formal faculty mentorship program for women and URMs
- Development of guidelines and faculty education on appropriate mentorship, clearly addressing perceived "dangers" of mentoring women in the #MeToo era
- Creating evaluation mechanisms that hold mentors accountable

SECTION 4: HIRING

- Set a hiring goal for the number of URMs and women, and track your success
- Embrace a holistic review process, establishing admission criteria that balance Experience, Attributes, and Metrics (EAM)
- Create standardized interview questions and structured interviews, e.g. with the use of the multiple mini-interview format
- Recruit a diverse admission committee
- Train all practitioners in interview techniques, and compensate them accordingly

SECTION 5: ADVANCEMENT AND RETENTION

- Diverse faculty development programs including formal mentorship and research grants
- Diversity panel oversight for all faculty recruitments and promotions
- Supporting employee interest groups
- Develop and offer flexible work policies
- Childcare initiatives
- Fair and transparent compensation and promotion guidelines

SECTION 6: LEADERSHIP AND OVERSIGHT

- Articulate and cascade CEO commitment to galvanize the organization
- Create a diversity oversight committee to ensure compliance with initiatives and track effectiveness of programs
- Establish concrete engagement points for senior leaders, track attendance
- Collect and review data biannually on (1) reasons for leaving, (2) promotion rates, and (3) quality/quantity of choice assignments spliced by demographics
- Host quarterly listening sessions with leadership on diversity-related issues

GUIDE SUMMARY

- Orthopaedic surgery currently ranks as the least diverse specialty in medicine, with women making up approximately 14.5% of orthopaedic residents currently
- A diverse patient population is best served by an equally diverse caregiver population
- Introduction of more women into the field yields increased innovation, coworker growth, and financial profit
- Integrate diversity training on bias and diversities impact on the workplace into education

- Create early exposure opportunities through pipeline programs and increased media coverage of women in orthopaedic surgery
- Create formal mentoring programs for underrepresented minorities
- Standardize the hiring process and develop quantitative goals with measurable outcomes
- Develop explicit flexible workplace policies to accommodate diverse candidates in the profession
- Obtain the buy-in of leadership, and develop accountability mechanisms to meet diversity goals

Want to learn more? Here are some of our top resources:

◊ AOFAS/RJOS/JRGOS Webinar: Mentoring in a Diverse Workforce, Dr. Erica Taylor

◊ Rohde RS, Wolf JM, Adams JE. Where Are the Women in Orthopaedic Surgery? *Clin Orthop Relat Res.* 2016;474(9):1950-1956.

◊ Day MA, Owens JM, Caldwell LS. Breaking Barriers: A Brief Overview of Diversity in Orthopedic Surgery. *Iowa Orthop J.* 2019;39(1):1-5.

◊ J. S. The Benefits of Cultural Diversity in the Workplace. In. *Forbes Magazine*: Forbes; 2019.

◊ Hunt V. YLPSD-FS. *Delivering through diversity.*: McKinsey & Company Report;2018.

◊ Okike K, Phillips DP, Swart E, O'Connor MI. Orthopaedic Faculty and Resident Sex Diversity Are Associated with the Orthopaedic Residency Application Rate of Female Medical Students. *J Bone Joint Surg Am.* 2019;101(12):e56.

◊ Mason BS, Ross W, Ortega G, Chambers MC, Parks ML. Can a Strategic Pipeline Initiative Increase the Number of Women and Underrepresented Minorities in Orthopaedic Surgery? *Clin Orthop Relat Res.* 2016;474(9):1979-1985.

◊ Cannada L.K. WJM. *RJOS Guide for Women in Orthopaedic Surgery.* 2nd Edition ed. Rosemont, IL: Ruth Jackson Orthopaedic Society; 2014.

◊ College AoAM. *Roadmap to Diversity: Integrating Holistic Review Practices Into Medical School Admission Processes.* Association of American Medical Colleges; 2010.

◊ Kuehn BM. Fixing the Parent Trap for Resident Physicians. *JAMA.* 2020.

◊ Unit EC. *GENDER-NET analysis report: award schemes, gender equality and structural change* 2019.

◊ Podcast: "She Can Fix It", Dr. Alana Munger

◊ Gerull KM, Salles A, Porter SE, Braman JP. Strategies for Recruiting and Retaining Women and Minorities in Orthopaedics. J Bone Joint Surg Am. 2021.

◊ Cannada LK. RJOS Medical Student Guide for Orthopaedic Surgery. 1st Edition. Rosemont, IL: Ruth Jackson Orthopaedic Society; 2020.