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Clinical Faceoff

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# Clinical Faceoff: A Changing Landscape—Current and Recent Orthopaedic Residents Discuss Gender, Subspecialization, and Accountability

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Orthopaedic surgery residents today train in an environment that is more receptive to technological advancements, is more diverse, and places greater emphasis both on patient safety and physician burnout than did their predecessors. Indeed, residencies have seen a larger influx of women residents entering orthopaedics compared to previous years [5]. The use of smartphones has changed how residents seek knowledge and prepare for surgery, as well as how they remain connected to their work. Similarly, administrative pressures emphasizing value and a culture of patient safety have trickled down from staff to residents. More objective, proficiency-based approaches are increasingly supported with the use of surgical simulators, shifting away from the apprenticeship model of previous generations [1].

At the same time, orthopaedic residents face many of the same issues we have seen play out in other industries, and across society at large. Gender equality remains a critical issue in orthopaedics [2]. Moreover, the emphasis on value-based care and efficiency strains efforts to keep residents engaged and learning.

Recognizing the importance of these issues as a current orthopaedic resident at the Cleveland Clinic, I solicited the opinions of two surgeons who are not far removed from today's training milieu—Drs. Ekaterina Urch and Samuel A. Taylor. Fortunate to have been mentored by both individuals as a medical student, Drs. Urch and Taylor both graduated from the prestigious Hospital for Special Surgery residency in 2016 and 2013, respectively, are passionate about education, and represent future thought leaders in the field. Dr. Urch provides a vantage point as a recent residency graduate now in private practice at The Center in Bend, OR, USA. Dr. Taylor offers his perspective as a young academic orthopaedic surgeon and now an Assistant Professor at the Hospital for Special Surgery in New York, NY, USA.

**Prem N. Ramkumar MD, MBA:** *There has been interest in bringing in more women to orthopaedics given the present disparity, but progress has been slow due to various factors including lack of role models and exposure [4]. From either personal experience or the accounts of others, what role does gender play in today's orthopaedic residency?*

**Ekaterina Urch MD:** My experience as a woman in orthopaedic residency did not differ in any meaningful way from that of the men with whom I worked. From the 10,000-foot view, I state without hesitation that I was faced with the same expectations, provided the same operative and academic opportunities, and treated with the same degree of respect as the men who trained alongside me. I am incredibly grateful for my training and for the people who took the time to mentor me and teach me to be the surgeon that I am today.

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As I examine the daily battles throughout my 5 years, however, subtleties in how my day-in and day-out experiences differed from that of the men with whom I worked come into clearer view. Although I think our specialty has come a long way in addressing gender discrimination, I do believe that the well-established "boys club" mentality of orthopaedics still persists. Along with the standard stresses of orthopaedic training, women are likely to find themselves facing off against certain implicit biases, such as physical strength limitations or the desire for a greater work-life balance [4]. This adds another dimension to the burden of training as we strive to avoid playing into that bias at all costs. Sometimes, unfortunately, this translates into hesitating to ask for help when help is truly needed. In other cases, women residents may find that they are given less autonomy in the operating room compared to residents who are men, a discrimination that in the long-term impacts surgical decision making and confidence [3].

It is critical these issues are brought into light and we call upon our community to evolve towards a better collective. In my opinion, change is happening (even as the data show little to no change [4, 6]). The "boys club" culture is slowly fading, in my view, as more women enter and assume leadership roles in the field. Sobel and colleagues [5] demonstrated a greater proportion of women residents in orthopaedic programs in departments that have more women in faculty leadership positions, demonstrating the value of having women as role models who can recruit more of us to the field. Within our own circles, the support systems and mentorships that older generations of women never had continue to grow and expand as more women join the field. Nationwide organizations such as the Rush Jackson Orthopaedic Society and the Perry Initiative are leading the charge. I am excited to see what is in store for our specialty in the coming decades as more women rise into national and international leadership roles.

**Samuel A. Taylor MD:** I agree with Dr. Urch and ultimately hope that orthopaedics is perceived as an elite subspecialty group of professionals that welcome driven and talented people regardless of gender. While my impression as a resident was one of clinical, surgical, research, social, and gender equality, I concede that as a white man, I may not be fully qualified to make such an assertion. That said, I believe that most residents, regardless of gender or race, would prefer greater autonomy in the operating room and elsewhere in training. Collectively as orthopaedic surgeons, we believe in meritocracy. Those who demonstrate hard work, perseverance, and dedication to perfecting our craft are rewarded with opportunity, while those who do not risk being passed by. While I hope our meritocracy is gender and race blind, some suggest that it may not be. As such we must reconsider the ways we train, evaluate, demerit, and reward trainees at all levels to ensure equality throughout the process.

As a father of three children and husband to a working mother, I believe the stresses faced by men and women during family planning and rearing are simply different and often incomparable. Men and women have obvious differences regarding their window of opportunity to have a family. I can imagine a woman feeling she must choose between work or family, whereas men rarely are faced with such a dilemma. Our field would likely benefit from a new structure that supports women who wish to have a family during training.

**Dr. Ramkumar:** *With more orthopaedic trainees pursuing fellowships and fewer training as "generalists," how have you or your colleagues directed their learning or training, if at all, to reflect the skills they will ultimately use in practice?*

**Dr. Taylor:** In the immortal words of Bob Dylan, "The times they are a-changin'." I believe the changing orthopaedics landscape favors surgeons with fellowship training. Certificates of Added Qualification (CAQ) imposed by subspecialties such as hand surgery and sports medicine further alienate the generalist, or at least alienate the perception of the generalist. This is compounded by economic and medicolegal pressures—real or perceived—that further drive graduating residents to believe subspecialization is necessary. Many hospital systems and even private practices are moving away from the generalist approach. No doubt our trainees feel this pressure, and, in fact, nearly 100% of residents at Hospital for Special Surgery seek additional subspecialty training.

As an educator, I do not believe it is my place to resist this. In fact, I support it. I believe that subspecialization likely improves care. That said, a strong foundation in general orthopaedic principles remains central to orthopaedic training as there exists much overlap between subspecialties and the fundamentals apply broadly. Indeed, general orthopaedics holds great value even if we end up subspecializing. This broad foundation of knowledge allows us to understand the frequent interplay between different joints and the overlapping, sometimes masquerading, nature of pathologies. The shoulder surgeon must be attuned to the cervical spine. The sports surgeon must understand procedural implications in the pediatric patient.

The arthroplasty surgeon must understand metabolic bone and trauma principles. We all must remain vigilant to oncologic signs and symptoms.

**Dr. Urch:** I completely agree. Patients are increasingly seeking out specialists for specific ailments, especially in urban communities where the density of specialized orthopaedic surgeons is high. Even so, the underlying expectation is always that the surgeon understands the basic principles of orthopaedics and the musculoskeletal system upon which (s)he can build his or her expertise and clinical decision-making. Having said this, it is also important to note that in more rural areas, access to care is often limited. In such cases, the community may be better served by a surgeon well versed across all fields of orthopaedics, namely a generalist.

My training as a generalist has been invaluable as I begin my carrier in private practice in a relatively remote community where the nearest academic center is hundreds of miles away. Although I completed a sports medicine fellowship after residency, my first few months in training have brought me face-to-face with everything from head to toe and fully engaged all aspects of my orthopaedic training, not just that of my subspecialty. The learning curve remains steep, but I am thankful for the knowledge I can draw upon from the broad training during my residency. And I cannot stress enough the interplay between specialties. Everything one sees in the clinic and operating room is a learning point that can then be applied to a completely different situation.

**Dr. Ramkumar:** *Both residents and residency education are continuously evolving, but few have challenged the environment in which we learn. How does the traditional culture of hierarchy contribute to or hinder tomorrow's next generation of surgeons?*

**Dr. Urch:** Just as with previous generations of trainees, discipline, diligence, and efficiency are king when it comes to successfully navigating orthopaedic residency and evolving into a competent, well-trained surgeon. The key to all three is learning accountability. If one holds oneself accountable for his or her actions and for the consequences that those actions bring, decisions made in this frame of mind generally will be good decisions. Unfortunately, accountability is not something that is easily taught, particularly in medical training where the ultimate responsibility always falls on the attending surgeon and rarely on the trainee.

This is where the benefits of a hierarchical structure really comes into play. The best way to teach accountability, in my opinion, is in the operating room. If a resident knows he or she will be expected to lead the case, nine times out of 10, he or she will come prepared because suddenly they're the point person. Autonomy in the OR then would naturally lead to more ownership of the patient. The only way this form of training would work is if there is an established hierarchy within the training program—a system that forces the resident to feel a sense of accountability to both the attending surgeon and, consequently, to the patient him and one's self.

Another excellent way to teach accountability is to allow the senior resident to lead a junior resident through a case. Nothing teaches accountability like allowing autonomy in the operating room. Autonomy is undoubtedly the strongest motivator for preparation. The resident should be encouraged to lead the work-up to surgery, develop a surgical plan, and prepare a postoperative course – things that he or she will be required to do repeatedly as a practicing surgeon. In this way, the senior resident is driven to embrace ownership of the patient and take the lead in his or her care. There is suddenly motivation to follow the patient more carefully in his or her postoperative course and to sincerely be interested in that patient's outcome.

Unfortunately, this is not always easy given time constraints and attending surgeon unfamiliarity with the resident given the high turnover of residents as they rotate through each service. Knowing this, I would encourage academic institutions to look closely at how their residency programs are structured. It seems the most conducive way of addressing this problem is by identifying a small handful of senior surgeons in each specialty with a vested interest in resident education. The training program should aim to structure the resident experience around these individuals. The idea is to harbor an environment in which attendings and residents can become familiar with each other and build a bond that then leads to trust in the operating room.

**Dr. Taylor:** I worry a bit about a generation raised on participation trophies. Of course, trainees need to know when they have done something well so they can replicate the action and build further. That said, I believe to a certain extent in what the band teacher in the movie *Whiplash* said to his students, "the two most dangerous words in the English language are 'good job.'" The hierarchy exists for a reason and is respected by the residents. As educators, we sit atop this hierarchy with the power to shape the minds and skills of our residents and fellows. Attendings who provide only positive feedback fail as educators.

### References


1. Atesok K, Satava RM, Marsh JL, Hurwitz SR. Measuring surgical skills in simulation-based training. *J Am Acad Orthop Surg*. 2017;25:665-672.
2. Hariri S, York SC, O'Connor MI, Parsley BS, McCarthy JC. Career plans of current orthopaedic residents with a focus on sex-based and generational differences. *J Bone Joint Surg Am*. 2011;93:e16.
3. Meyerson SL, Sternbach JM, Zwischenberger JB, Bender EM. The effect of gender on resident autonomy in the operating room. *J Surg Educ*. 2017;74:e111-e118.
4. Rohde RS, Wolf JM, Adams JE. Where are the Women in Orthopaedic Surgery? *Clin Orthop Relat Res*. 2016;474:1950–1956.
5. Sobel AD, Cox RM, Ashinsky B, Eberson CP, Mulcahey MK. Analysis of factors related to the sex diversity of orthopaedic residency programs in the United States. *J Bone Joint Surg Am*. 2018;100:e79.
6. Van Heest AE. Fishman F, Agel J. A 5-year update on the uneven distribution of women in orthopaedic surgery residency training programs in the United States. *J Bone Joint Surg Am*. 2016;98:e64.