



Equity in Surgery: Being Diverse and Inclusive, Isn't Enough

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Insights

- There are still many groups who remain underrepresented in medicine (URiM) despite the recent push in the last few decades to increase diversity.
- Equity in gender has been gradually increasing over the past few decades, but unfortunately, the same cannot be said for other URiM groups.
- Increased equity can lead to better access to care, better quality of care, increased creativity and innovation and better business performance overall.
- There is still a long way to go to reduce or eliminate existing inequalities and change the long-standing systematic issues facing many equity seeking groups in today's surgical fields.
- Efforts to increase diversity alone do not sustain change; equity is important in moving forward,
- An equitable and inclusive environment fosters fair opportunity, meaningful engagement and empowers individuals to contribute. This leads to decreased burnout, increased talent development and improved patient care.
- Professional organizations and institutions should consider not only implementing an Equity, Diversity and Inclusion (EDI) plan, but interrupting and responding to institutional practices, systems and policies that undermine this vision.
- As individuals, we need to **A.D.V.O.C.A.T.E.** for change at the individual and institutional level.
- Ultimately, change is required at the institutional level. Organizations need to create protocols and policies that showcase their commitment to equity, diversity and inclusion.

To Forget Our History Is to Repeat it

“Say his name, and the busiest heart surgeons in the world will stop and talk for an hour.” A Washingtonian article describes the life of Vivien Thomas, an African American laboratory assistant who “might have been a great surgeon. Instead, he became a legend.” (1) In 1930, Thomas began working in the lab of a young surgeon named Alfred Blalock. The duo went on to work most famously together at John Hopkins in Baltimore, Thomas working as a surgical technician and Blalock as surgeon-in-chief. Together, they pioneered many new procedures that revolutionized cardiothoracic surgery. After Blalock's retirement in 1964, Thomas stayed on at John Hopkins and went on to become the Director of Surgical Research Laboratories; training many residents who themselves became very successful surgeons. (2) But despite his undeniable talent, integrity, strong work ethic and dedication, Thomas faced much discrimination for his presence in the operating room. He lived his life with a low salary, using side entrances to his workplace, his name left off every research publication. (3)

“[He] had come a long way with Blalock's help. But Thomas had not come the whole way. He had been Blalock's “other hands” in the lab, had enhanced The Professor's stature, had shaped dozens of dexterous surgeons as Blalock himself could not have—but a price had been paid, and Blalock knew it. Blalock's guilt was in no way diminished by his knowing that even with a medical degree, Thomas stood little chance of achieving the prominence of an Old Hand.” (1)

————— **Katie McKabe** —————
The Washingtonian

“I believe that everyone has talents and gifts—gifts that aid society as a whole or benefit one person at a time.” Dr. Damon M. Kennedy, a cardiac surgeon at the Texas Heart Institute, wonders if today's medical education truly cultivates and encourages students to follow in the footsteps of great historical heroes like Vivien Thomas; heroes who once paved the way for change, despite incredible odds, with character, talent and determination. (4)

Although times are different, there are still many groups who remain greatly underrepresented in medicine (URiM). They have been helped along in their journey by initiatives designed to diversify medical school demographics, but **bias**

and **discrimination**

still make formidable adversaries, especially in more specialized medical fields like surgery and particularly at the systemic, or institutional level. (6) While there is something to be said for the impact of individual bias, whether it is explicit (known) or implicit (unknown or hidden), **institutional bias** is a social force with much wider reaching effects that needs to be reckoned with if true change is to be made. (7)

"The action of supporting or opposing a particular person or thing in an unfair way, because of allowing personal opinions to influence your judgement". (5)

"Treating a person or particular group of people differently, especially in a worse way from the way in which you treat other people, because of their skin colour, sex, sexuality". (5)

Also known as systemic bias, is "a tendency for the rules, policies, practices, and procedures of particular institutions to operate in ways which result in certain social groups being advantaged or favored and others being disadvantaged or devalued". (7)

What is Equity, Diversity and Inclusion?

With a growing awareness for the need to address the issue of bias and discrimination, many professional organizations have adopted an **Equity, Diversity and Inclusion (EDI) policy**

In order to understand these EDI initiatives, we must first begin to understand what each of these terms means and the role they play in changing our profession for the better.

An action plan which focuses on improving an organizations "governance, transparency, and monitoring of its measures" and "addressing its long-standing equity, diversity, and inclusion challenges". (8)

Diversity

is the presence of differences within a given community (10) and diversity efforts often look to increase the numeric and proportional representation of different groups of people. (11) The American College of Surgeons outlines just a few of the many benefits of diversity that have been outlined in the research (Exhibit 1). (12)

"Diversity includes, but is not limited to ability/disability, age, appearance, citizenship status, ethnicity, gender and gender identity, geographic location, nationality/national origin, political beliefs, pregnancy/parental status, professional career level, race/colour, religion/value system, sexual orientation, socioeconomic background/social class". (9)

Better access to care for the underserved

Better quality of care

Better learning environment that increases creativity and innovation

Diversity is more likely to lead to novel questions in research

More inclusive and broad reaching solutions

Higher business performance outcome measures

Exhibit 1: Benefits of Equity and Diversity (12)

Simply put - diversity signals optics whereas inclusion confirms action. **Inclusion** ensures that individuals feel valued and welcome within a specific setting (10) and that this sense of belonging leads to an “experience of meaningful engagement, empowerment, and equality of opportunity”. (11) However, just because a group is diverse does not mean that it will also be inclusive. Many organizations are mandated to comply with diversity measures, making the decision relatively easy and simply a matter of balancing numbers by admitting or hiring a certain number of underrepresented candidates. The fear is that the progress made by many institutions to increase diversity will be counteracted if they do not think about how those candidates will feel or what opportunities they will have access to once admitted or hired.

“The first and foremost pre-condition is that we get beyond thinking and talking about EDI in terms of benevolence (the nice thing to do when we are feeling charitable) and in terms of compliance (the thing we are told we must do else we face some perceived punitive consequence). Instead, we need to understand and enact EDI priorities in terms of their necessity to justice (the right thing to do for equality of opportunity and inclusion) and in terms of excellence (the smart thing to do to ensure creativity, innovation, competitive advantage and relevance)... Behaviour motivated by compliance does not generate long-lasting progress and culture change.” (13)

————— **Dr. Arig al Shaibah, Ph.D** —————

Associate Vice President, Equity and Inclusion
McMaster University

In addition to being the right thing to do, creating an inclusive environment is key to moving forward and successfully achieving EDI goals. Inclusive environments not only lead to individuals feeling more valued, but they also have shown to decrease burnout, increase talent development and lead to a better quality of care for patients. (12)

Equity, not to be confused with **equality**, is when everyone within a community has access to the same

Equality is the right of different groups of people to have a similar social position and receive the same treatment. (5)

opportunities, despite their individual differences (10). While diversity and inclusion efforts are designed to help individuals persist despite existing inequalities, equity is aimed at changing the system that created the inequities in the first place – making achieving equity one of the most important goals for any EDI policy (14).

A Starting Point: Gender, Racial and Ethnic Diversity in Surgery

Efforts specifically aimed at increasing diversity in medicine have existed for some time. When it comes to gender diversity in surgical specialties, there has been some progress but progress has been slow (15); especially compared to the increased representation of women in medicine seen over the past few decades. In 1990, roughly 29% of physicians globally were female. In 2000, this percentage increased to 38%. As of 2015, 46% of physicians were female (16). However, this ratio continues to vary greatly across countries, with only 20% of doctors in Japan and as much as 74% of doctors in Latvia and Estonia being women (16). In some countries, the number of female physicians is expected to rise over time. In Canada for example, while only 41% of practicing physicians were female in 2017, the majority of physicians under the age of 45 were female (54%) and a gender balance is projected to be struck by 2030. (17)

Over the past few decades many medical schools have managed to achieve a gender balance, however as mentioned previously, these numbers continue to look very different when comparing medical specialties. For example, when looking at the number of first year trainees in selected specialties in Canada in 2017, women made up the majority in fields like Obstetrics/Gynecology (84%) and Pediatrics (74%) but were still vastly underrepresented in more specialized surgical fields like Neurosurgery (19%) and Orthopaedics (18%) (17). A commonly reported barrier being lack of mentorship, which has proven to be an important factor in the recruitment and retention of many URIM groups in surgical specialties. (15) Another common barrier is the broader societal attitude towards the domestic role of women, which has meant women often dedicate more time to performing domestic duties compared to their male counterparts. This contributes to the portrayal of the surgical profession as a poorer fit for women compared to other specialties. (18) This increased likelihood that women will work less hours is also an argument that is used to explain the existing pay gap. However, a study by Dossa et al. (2019) has found that in Ontario, Canada, women earned 24% less per hour spent operating compared to male surgeons and that this difference was largely attributable to the fact women generally performed less lucrative procedures (such as procedures performed on females, which pay much less compared to the equivalent surgery performed on males). (19)

Racial and ethnic diversity in Surgery represents another critical opportunity to examine systematic bias. When looking at the racial and ethnic diversity in medicine in the United States for example, the number of active physicians who identify as Hispanic, Asian, Black or African American, American Indian or Alaskan Native, Native Hawaiian or Pacific Islander and multiple race is not reflective of the country's current and quickly changing demographics (20) (Exhibit 2). These numbers highlight the need to continue to push for greater representation of racialized groups in the medical field.

Racial/Ethnic Group	% Active Physicians	% Current Population	% Projected Population	% Projected Population <18
White	56	60	43	36
Asian	17	6	9	8
Hispanic/Latino	6	17	25	33
Black or African American	5	13	14	13
American Indian and Alaskan Native	0.3	1	1.3	0.6
Native Hawaiian and Other Pacific Islander	Not Reported	0.2	0.3	0.2
Multiple Race	1	3	6.2	9
Unknown/Other	15			

Exhibit 2. Racial/ethnic group representation in the United States as a percentage of active physicians [statistics from 2018 (20)], current population [statistics from 2019 (21)] and projected population [projection for 2060 (22)]. Percentages may not add up to 100.0 due to rounding.

Both women and racialized groups are also greatly underrepresented in academic medicine and leadership positions. For example, White men and women made up 64% of medical school faculty (61% and 39% respectively), Black men and women accounted for 3.5% (42% and 58% respectively) and American Indian and Alaskan Native men and women accounted for even less, represented only 0.2% of medical school faculty members (57% and 43% respectively) (20). The composition of women and racialized groups becomes even less when examining higher-ranking leadership positions. (20)

Underrepresentation of Sexual and Gender Identities in Surgery

Different **sexual and gender identities** are also often underrepresented in surgery. Like most other URiM groups, this issue of representation goes beyond numbers and extends to their underrepresentation within the culture and attitudes of an entire community.

Include but are not limited to, individuals who identify as lesbian, gay, bisexual, asexual, transgender, two-spirit, queer and/or intersex (23)

A 2014 study by Lee et al. surveyed 388 general surgery residents about their perceptions of the influence of sexual orientation on the surgical training experience (24). Of the 388 residents, 10 identified as lesbian (2.6%), 24 as gay (6.3%) and 9 as bisexual (2.4%) (LGBT). Survey findings are outlined in Exhibit 3. With more than half of all surgical residents having witnessed homophobic remarks and none choosing to report it, and with more than half of all LGBT residents choosing to conceal their identity (24), it remains clear that some professional tenets are in great need of change.

	All Residents (%)	
Reported witnessing homophobic remarks by nurses or residents	54	
Reported witnessing homophobic remarks by surgical attending physicians	30	
Reported the event to a supervisor	0	
	LGBT Residents (%)	
Chose not to disclose their sexual orientation when applying for general surgery residency for fear that it would influence their acceptance	30	
Actively concealed their identity from other residents	57	
Actively concealed their identity from surgical attending physician	52	
	LGBT Residents (%)	Heterosexual Residents (%)
Felt uncomfortable speaking about their spouse or partner with fellow residents	36	3
Felt uncomfortable speaking about their spouse or partner with surgical attending physician	59	9

Exhibit 3. Survey results. Perceptions of the influence of sexual orientation on the surgical training experience (24).

“The hardest part about being a queer-identifying medical student isn't necessarily just a lack of official LGBTQ-oriented curricula -- it's the "unwritten" curriculum that is so disheartening... Despite all the well-meaning efforts to incorporate more LGBTQ training into medicine, more modules won't be enough. We need to address and drastically alter the attitudes in the medical hierarchy that stop queer medical students from feeling like they are in a safe space.” (25)

———— AAMC Medical Student ————

The Compounding Effect of “Intersectionality”

Special consideration needs to be given to the **intersectionality** of gender and other racialized groups. For example, representation in more academic leadership positions is impacted by gender but this impact is further compounded by race. Furthermore, belonging to two or more URiM groups can significantly impact the specific ways in which those individuals experience their journey in medicine.

the way in which different types of discrimination are linked to and affect each other (5)

“I felt terribly alone. As a new faculty member, I often felt unable to turn to my prior sources of social support...So, I decided to leave...I knew members of my medical community appreciated me and my work, but unless they intended to use their privilege to prevent Black and brown faculty from leaving, it was not worth it to stay.” (26)

————— Kali Cyrus, MD, MPH —————

A recent study by Mocanu et al. (2020) found that the intersectionality of gender and race can have many adverse effects during education and training. (27) The study surveyed 210 general surgery residents in Canada and found that women who were also members of a racialized community were less likely to agree or strongly agree that they had a collegial relationship with colleagues, feel like they fit in with their training programs and feel valued at work compared to their male colleagues who did not identify as a member of a racialized community. (27) Female residents also described significant concerns about receiving fewer training opportunities because of their gender compared to their male peers (54 [48.2%] vs 3 [3.0%]; $P < .001$). (27)

“Despite my significant credentials and extensive experience, according to my new colleagues, my justification for being in that position was solely based on my race. I remember thinking that even with a Ph.D. in hand, no amount of education will shield us from the impacts of the racist and sexist society in which we all live. That is why it is necessary to work toward building and sustaining inclusive environments. In such spaces, all people, regardless of their social identities, have equal access to opportunity and advancement, receive credit for their work, and are valued for more than just their membership in a social identity group.” (14)

————— Geraldine Cochran —————
Assistant Professor

Department of Physics and Astronomy and the Office of STEM Education at Rutgers University.

Being Diverse and Inclusive Isn't Enough: A Call for Creating Equitable Institutions

Initiatives towards supporting diversity and inclusivity have become popularized across multiple disciplines. On the surface, these programs shift the traditional image of professions from those that favor members of dominant groups, to those that represent the multicultural constitution of Canadian society. Hence, diversity and inclusivity programs are utilized towards creating the 'right image' and changing the 'wrong image' of institutions. (28) Consequently, changing one's image does not lead to systemic change. Valuing equality and diversity does not lead to long-term change. For meaningful transformation to occur, **equity** must be the driving force that shapes how professions create lasting change. Equity practices challenge the myth of equality and instead focus on leveling the playing field to ensure that marginalized communities have fair and just opportunities to fully participate in society (29). Furthermore, equity initiatives understand that institutional cultures advantage those who are privileged in society; therefore, equal participation is not possible without systemic change to remove the barriers that disadvantage communities outside of dominant groups. (29) Models in medicine and other disciplines favor individual skills and meritocracy in hiring practices, retention, promotion and the allocation of research grants. (30) Therefore, institutional culture is produced in and through dominant narratives about meritocracy as the gateway to success – if you work hard, you will be rewarded. When equity-seeking groups are 'included' they must pledge allegiance to the dominant narratives/culture within their field and oftentimes, their inclusion is quantified towards a successful implementation of 'diversity'. In contrast, equity policies recognize the historical and contemporary privileging of some groups and the systemic marginalization of others. Equity is an active process that holds organizations accountable for the ways in which dominant institutional culture produces barriers for many members of society. Equity is committed to changing the damaging social conditions of our world to ensure the full and successful participation of all members of society.

A Call to Surgical Leaders and Faculty:

“Senior physician-leaders of most academic communities continue to look the same, unlike the rest of the United States, which is becoming increasingly diverse. Senior leadership in many places also continue to express support for diversity without actually providing real support for diverse faculty, educational initiatives, or institution-wide policies that foster inclusivity and equity.” (21)

———— Dr. Kali Cyrus, MD, MPH ————

“When I sit across a student or resident with an interest to pursue a career in surgery, despite how adverse it may seem, I will try to light the flame. We need to have an infectious sense of encouragement. There's something special in all of us, and it is very important that we invite everyone to the table. Promoting diversity and equal opportunity will make us stronger.” (31)

————— Dr. Ian C. Bostock, MD, MS —————

Thoracic Surgery Fellow at the University of Texas MD Anderson Cancer Center

“Anti-racism is not just the work of committees. Individual staff members should speak up when they hear racist remarks. The hidden curriculum — unintended lessons learned by students from the behavior of faculty — is powerful...when a faculty member remains silent in the face of racist comments, this teaches students that the statements are acceptable... But when people in positions of power start to normalize calling out inappropriate remarks, students will feel more supported in their learning environments.” (32)

————— Dr. Christle Nwora, MD —————

A Call to Organizations:

“We need transparent, objective compensation plans. No matter how objective our current approaches may seem, they are almost all opaque in some way. We need blinded practices for evaluating manuscripts and grants, for hiring, and for promotions. There is no reason one needs to see the name or the gender of the person when evaluating their work. We need explicit, purposeful, and fair distribution of uncompensated teaching and service workloads, or we need to figure out how to compensate those activities fairly. We need equal leave policies and tenure clock extensions...We need objective measures of success and milestones for promotion that are defined a priori and

————— Caprice C. Greenberg, MD, MPH —————

Professor of Surgery and the Morgridge Endowed Chair in Health Services Research
University of Wisconsin

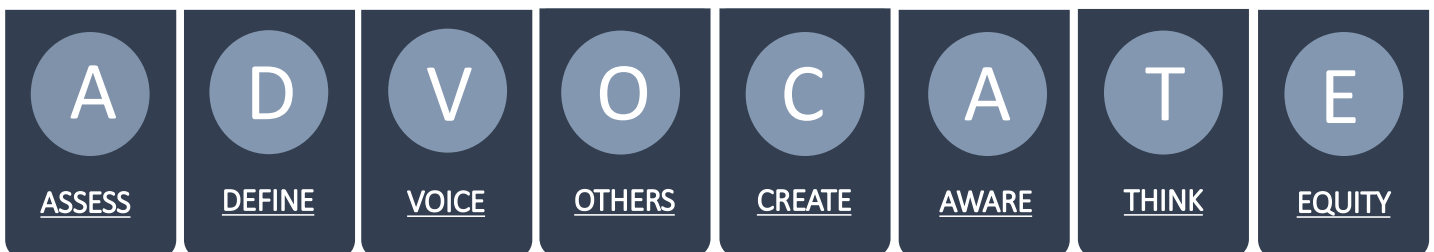
“Success, in large part, will circle back to the extent to which decision-makers and influencers not only reinforce and reward those behaviours and practices which demonstrate alignment with and enhancement of strategic EDI priorities, but that they feel motivated, empowered, and compelled to interrupt and respond to those everyday patterns of behaviour and practices that may diminish or undermine the vision and strategy towards inclusive excellence.” (23)

Dr. Arig al Shaibah, Ph.D

Associate Vice President, Equity and Inclusion
McMaster University

Six Actions Towards Equity, Diversity and Inclusivity

To acknowledge there is a problem is a start, but real change is not passive. Here are six actions we can take to **A.D.V.O.C.A.T.E.** for change on an individual and institutional level. (7) Organizations need to create protocols and policies that showcase their commitment to equity, diversity and inclusion but we will all need to be proactive in holding them accountable.



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1. Assess your role in perpetuating systemic bias.

- a. Recognize your own individual bias. We all have them – it's impossible not to. The key to progress and the creation of a more inclusive profession begins with a personal awareness of our own bias and continues on with the goal of addressing them everyday.
 - i. Ask yourself how might this bias benefit specific demographics? Which groups are hurt or limited by this bias?
 - ii. This tool (<https://implicit.harvard.edu/implicit/selectatest.html>) developed by Project Implicit at Harvard University, can help to identify the bias we hold for or against certain groups of people. (34)

- B. Be aware of your own privilege. This is a great place to start and will help you to become more aware of the ways in which your privilege affects others and institutional practices.
- I. Ask yourself how does your privilege interact with your individual bias? Does your privilege affect others? What power/leverage/influence do you have within your institution that can help make a change?
- C. Recognize that excellence is inclusive and only really achieved when a more diverse set of opinions, experiences and ideas are present.

2. **Define your new role for breaking down these systemic biases.**

- a. What is the contribution you want to make? Here are a few good places to start (35):
- I. Build an understanding for other people and make them feel safe. Learn by asking questions and having meaningful discussions. Don't forget to ensure they feel safe by stating your intentions and letting them know you respect the boundaries of the conversation.
- ii. Listen more, and speak carefully. Build an understanding by really hearing what someone is trying to say. Avoid using gender specific language, specific pronouns or assumptions about a person's identity. When in doubt, ask.
- iii. Speak out against others when their comments and actions do not support an inclusive environment.

3. **Rally the Voices of Others.**

- a. Learn all you can, and teach those you encounter.
- b. We cannot affect substantial, sustainable change at the systems level without a large group of people working towards the same goal.
- I. Systemic bias persists when key players rotate in and out of the workplace.
- ii. It will take a large group of people to take on the individuals who may deliberately or inadvertently support the bias that exists.

4. **Create a movement.**

5. **Be Aware of department or organizational strategies.** Do they have an EDI Strategy? How is it being assessed? What are the goals? How do they plan to reach them? How can you raise awareness of these EDI strategies with students and colleagues? Exhibit 4 outlines some resources that can help guide in the assessment, creation and implementation of EDI strategies.

Organization	Link to Resources
U.S. Department of Health and Human Services - National Culturally and Linguistically Appropriate Service (CLAS)	Improving Quality of Care Standards Checklist
Canadian Medical Association (CMA)	Guiding Principles and Recommendations
Association of American Medical Colleges (AAMC)	Diversity and Inclusion Toolkit Resources
Government of Canada – Canada Research Chairs	Best Practices for Recruitment, Hiring and Retention
McMaster University – Equity and Inclusion Office	Guiding Principles for Best Practice

Exhibit 4: Equity, Diversity and Inclusion Resources (EDI)

6. **Think about Equity across roles in your workplace.** Consider the representation of certain groups at all levels within your workplace. You will also get a lot more information by also assessing the current strategies for recruitment and the opportunities available for development, promotion and engagement. When presenting any findings, remember to:
- a. Set a clear intention.
- b. Lead with data.
- c. Diagnose accurately.
- d. Deconstruct: Eliminate subjective processes.
- e. Reconstruct with objectivity.
- f. Build in accountability and ongoing measurement

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