Report from the Workforce on Diversity and Inclusion—The Society of Thoracic Surgeons Members' Bias Experiences

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Diversity and inclusion within The Society of Thoracic Surgeons is paramount to the growth and excellence of our specialty. As such, discussions about challenges that prevent our Society from achieving this goal are necessary. The Workforce on Diversity and Inclusion has been tasked with understanding our membership's comprehension and experience with bias, which is known to have a negative impact on those of female gender, minority race, sexual orientation status, and religious status. Bias contributes to the fact that we are far from gender parity within our Society's leadership and that we must make significant changes in order to achieve a diverse membership. Within this report, we discuss the literature regarding experience with gender- and racial/ethnic-directed implicit and explicit bias during surgical training and within the cardiothoracic surgical workforce. We also share survey results on members' experience with racial/ethnic-, gender-, and other minority demographic–directed bias.

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The Society of Thoracic Surgeons (STS) Workforce on Diversity and Inclusion was established in February 2019. Its creation followed the 2017 Ad Hoc Presidential STS Task Force on Diversity and Inclusion commissioned by then president, Dr Richard Prager. It was charged with cultivating an environment of inclusion and diversity within the STS as well as the cardiothoracic surgical specialty overall. The STS has been on the forefront of understanding the importance of diversity and inclusion in our Society and specialty. To that end, the Task Force and subsequent Workforce were created with a mission to understand barriers to achieving an equitable thoracic surgical work force. Our Society understands that we must recognize the challenges that prevent many from entering our specialty and understand how we are preventing some members from thriving. Although explicit bias is largely renounced—at least in public—implicit bias is pervasive and uncontrolled in the surgical community as a whole and in the cardiothoracic surgical community in particular.

One of the priorities of the STS Workforce on Diversity and Inclusion is to determine the needs and views of the STS membership surrounding the subject of bias, whether explicit or implicit. Explicit bias "refers to the attitudes and beliefs we have about a person or group on a conscious level."[1] Explicit bias is conscious expression of discriminatory action, such as overt racism, or deliberate activity that denigrates religion, gender, disability, and socioeconomic background, or both. Implicit bias refers to unconscious discriminatory attitudes toward people. All individuals may express implicit bias.

Because exposure to negative bias lowers confidence, fractures camaraderie, and keeps groups underrepresented in medicine (UIM) and women from thriving in our field, it is critical to address the issue head on. And because bias is typically targeted toward those who are already marginalized and of minority status, it perpetuates feelings of isolation and feeds stereotypes— neither of which is desirable in this Society.

To be clear, implicit bias is ubiquitous. We all are subject to it. Because there are several associated negative and often unintended consequences, we need to discuss how we get in front of it as a Society. Within this report, we will discuss the literature regarding experience with gender- and racial/ethnic-directed implicit and explicit bias during surgical training and within membership in the cardiothoracic surgical workforce. We will also share the survey results on members' experiences with racial/ethnic- and gender-directed bias. Our goal is to further our collective understanding of the importance of addressing this topic and guide our next steps toward combating bias within our society.

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Gender-Directed Implicit and Explicit Bias

Gender disparities exist at multiple levels spanning medical education, surgical practice, and leadership and can be self-perpetuating if not identified and addressed.[2] The prevalence of overt or explicit gender-based biases and experiences within surgery have been well documented in the literature, yet the effects of implicit gender biases can be equally damaging if not insidious. Implicit bias has been implicated as one factor contributing to the lack of equal opportunities for career advancement in medicine and surgery experienced by women and other minority groups.[2,3]

Results of implicit bias testing of health care workers show a stronger association of male gender with career and surgery both among patients and medical professionals.[4] In another study evaluating implicit bias and leadership, although a slight preference was found toward men over women among all faculty tested with the Implicit Association Test, stronger levels of implicit bias were found in older male faculty.[5] We found similar results among responses on the STS Diversity and Inclusion climate survey in that views about gender-related experiences also differed according to the gender of the respondent, as detailed below.

Although on the surface the much larger representation of female members in STS leadership among respondents (25 of 75 [33%]) than the proportion of women in the larger cardiothoracic surgical workforce (7%) suggests we are making significant strides toward parity, closer examination of the historical and current 2019-2020 STS governing structure refutes this because few women hold high-level leadership positions. Notably, only 1 woman has ever been president of the STS (posthumously). Furthermore, at present only 2 of the 19 members of the Board of Directors are women, and there are no women members of the Executive or Nominating Committees or holding position of Council Chair. Similarly, implicit gender biases have been demonstrated to negatively affect the surgical training experience, with female residents receiving significantly less surgical autonomy as rated by both residents and attending surgeons,[6] both of which can have devastating consequences regarding confidence and feelings of self-efficacy which are critical traits of a successful surgeon.

The relative contributions of implicit and explicit bias on the underrepresentation of women in the cardiothoracic surgical work force and leadership are difficult to quantify. Fortunately, solutions that improve awareness, such as education through bias literacy and training, have been shown to have a positive impact toward decreasing measures of implicit bias among both men and women.[5] More durable and substantive change can be challenging and requires a commitment to changing organizational culture with an intentional approach to increasing diversity. Promoting counter-stereotype exposure to women as leaders, mentorship programs, and use of objective criteria in medical student, resident, and faculty evaluations, hiring decisions, the promotions process, and criteria for compensation plans are some areas where inequities can begin to be addressed.[2,3,7]

Race/Ethnicity-Directed Implicit and Explicit Bias

The Association of American Medical Colleges reports that the percentage of medical school graduates by race and ethnicity has remained consistent over time, with African Americans representing only 5.7% and Hispanics only 4.5% of medical graduates,[8] despite African Americans representing 12.4% and Hispanics 17.4% of the United States population. Any meaningful conversation about why there is difficulty establishing racial and ethnic diversity within medicine, surgery, and cardiothoracic surgery must include a discussion regarding implicit bias.

Capers and colleagues[9] found significant levels of implicit white (vs black) preference during an implicit bias test given to a prominent medical school admission committee. The authors suggest that this bias can and does impede the entry of African Americans and other UIM into the medical profession.[9] Wong and colleagues[10] surveyed 4339 surgery residents during the American Board of Surgery In-Training Examination and noted that minority residents report less positively on program fit and relationships with faculty and peers. Black and Asian residents were more likely to report that surgical attendings would think worse of them if they asked for help ($P = .002$).[10] These findings suggest an association between implicit bias and decreased satisfaction and fit of diverse surgical residents.

A smaller study looking at 19 residents of black race reported training experiences characterized by pervasive discrimination, lower expectations from supervisors, harsher consequences for mistakes, and social isolation.[11] To explore these issues and identify contributing factors, a research team, led by Osseo-Asare, conducted qualitative interviews with more than two dozen UIM medical and surgical residents during a clinical conference in 2017. They were asked about their general experiences as residents, specific incidents involving race and discrimination, and the diversity climate at their institutions, among other questions. Three major themes emerged from that study:

First, minority residents described daily experience of subtle or covert instances of bias and microaggressions.[12] Microaggressions are defined as "subtle snubs, slights, and insults directed towards minorities, as well as to women and other historically stigmatized groups, that implicitly communicate or at least engender hostility."[13]

Second, UIM residents also detailed being asked to serve as race/ethnicity "ambassadors" to help resolve issues of diversity at their institutions.

Third, the residents reported experiencing a dichotomy between their professional and personal identities.[12] Interestingly, the respondents in that study also described being mistaken for nonmedical staff in the hospital by patients, patient families, and ancillary staff, which can undermine confidence and feelings of belonging. These studies reveal that implicit bias poses many challenges to UIM trainees.

Although many research studies have looked at disparities and racial/ethnic-directed implicit and explicit bias by health care providers toward patients, much less has been done to characterize bias from patients toward their providers. In her essay, Viswanathan[14] details several instances in which UIM physicians and trainees describe being discriminated against by patients based on race or gender, or both. In one vignette, she talks about the case of Dr Tamika Cross, an African American physician, who was prevented from providing assistance to a person who was in distress on a flight. It was not until she provided her medical license that she was allowed to help. Stories like this are sensationalized by popular media, but they are not uncommon. There are countless stories of UIM physicians being confused for janitors, maintenance persons, nurses, etc. Instances like these remind us that implicit biases toward UIMs persist from training to faculty status. Implicit bias negatively impacts our UIM faculty, trainees, and medical students.

The STS diversity and inclusion climate survey suggests that many STS members view achieving a diverse cardiothoracic surgery workforce as important; however, women and UIMs continue to lack proportionate representation in the cardiothoracic surgery workforce. To achieve this goal, we should consider implicit bias training for our departments, faculty, trainees, and students. We also need to be open to honest dialogue about experiences of bias in real time from our UIM colleagues. The mission of the STS Workforce on Diversity and Inclusion is to highlight these discussions with education throughout the Society.

STS Members' Experiences With Implicit and Explicit Bias

To understand STS members' views on diversity and inclusion as well as experiences with issues that involve diversity and inclusion, the Task Force queried members with an anonymous climate survey.[15] The STS administered the survey to STS members with an active email account. From November 2017 to January 2018, the Task Force queried 5158 members and 481 responded, for a response rate of 9.3%. The survey asked respondents to self-identify demographic variables, which included gender identity, racial/ethnic group, and cardiothoracic surgery workforce decision maker (ie, individuals who make decisions on who enters the workforce, such as division chief, department chair, or residency program director).

Because of a response rate of just 9.3%, the results of the survey do not scientifically represent the views of a majority or even a plurality of STS members; however, the results identify important views of many STS members. To assess members' experiences with directed implicit and explicit bias, survey recipients were asked: "Have you ever felt unfairly treated (eg, marginalized, mistreated, harassed, excluded, bullied, not promoted, diminished) by your colleagues within the larger cardiothoracic professional community because of your race/ethnicity/gender/sexual orientation/religion/age/disability status?" Table 1 reports key results. Of those who responded, 161 (33.8%) answered "yes," compared with 296 (62.1%) answering "no" and 20 (4.2%) answering "I don't know." Of note, a majority (69.7% [n = 53]) of respondents who self-identified as female and a majority (82.6% [n = 19]) who self-identified as black/African/African American answered "yes."

To test cultural dexterity, or the ability to comprehend and understand and adapt to the needs of patients, colleagues, and learners from diverse social and cultural backgrounds,[16] STS members were asked "How often do you feel comfortable treating patients of a background different than your own?" and "How often do you feel comfortable teaching students and/or trainees of a different background than your own?" (Table 2). Surprisingly approximately 90% of respondents, regardless of demographic background, answered "I sometimes feel comfortable" or "I am nearly always comfortable." This answer by respondents may seem counterintuitive given the evidence that bias, especially implicit bias and microaggressions toward women and those UIM individuals, is common in the health care workforce and

Table 1. The Society of Thoracic Surgeons Workforce on Diversity and Inclusion Climate Survey

	Have you ever felt unfairly treated (eg, marginalized, mistreated, harassed, excluded, bullied, not promoted, diminished) by your colleagues within the larger cardiothoracic professional community because of your race/ethnicity/gender/sexual orientation/religion/age/disability status?		
Respondents	Yes, % (n)	No, % (n)	I Don't Know, % (n)
All respondents	33.8 (161)	62.1 (296)	4.2 (20)
Female	69.7 (53)	23.7 (18)	6.6 (5)
Male	24.7 (75)	72.0 (219)	3.3 (10)
Black/African/African American	82.6 (19)	17.4 (4)	0.0 (0)
White/Caucasian	26.9 (61)	71.8 (163)	1.3 (3)
Latino/Hispanic	24.1 (7)	72.4 (21)	3.5 (1)
Asian/East Asian/South Asian	39.4 (28)	47.9 (34)	12.7 (9)
CT surgery workforce decision makers	28.7 (27)	70.2 (66)	1.1 (1)

CT, cardiothoracic.

Table 2. The Society of Thoracic Surgeons Members' Views on Cultural Dexterity

	How often do you feel comfortable treating patients of a background different than your own?			
	I almost never feel comfortable/I rarely feel comfortable	I am neither comfortable nor uncomfortable	I sometimes feel comfortable/I am nearly always comfortable	N/A; I do not perform patient care
Respondents	% (n)	% (n)	% (n)	% (n)
All respondents	3.1 (15)	2.7 (13)	91.4 (437)	2.7 (13)
Female	0.0 (0)	1.3 (1)	90.8 (69)	7.9 (6)
Male	3.9 (12)	2.6 (8)	92.5 (282)	1.0 (3)
Black/African/ African American	8.7 (2)	0.0 (0)	91.3 (21)	1.1 (5)
White/Caucasian	2.6 (6)	1.8 (4)	93.0 (212)	0.0 (0)
Latino/Hispanic	0.0 (0)	0.0 (0)	100.0 (29)	0.0 (0)
Asian/East Asian/ South Asian	4.2 (3)	4.2 (3)	88.7 (63)	2.8 (2)
CT surgery workforce decision makers	4.3 (4)	2.1 (2)	93.6 (88)	0.0 (0)

	How often do you feel comfortable teaching students and/or trainees of a different background than your own?			
	I almost never feel comfortable/I rarely feel comfortable	I am neither comfortable nor uncomfortable	I sometimes feel comfortable/I am nearly always comfortable	N/A; I do not teach students and/or trainees
	% (n)	% (n)	% (n)	% (n)
All respondents	2.9 (14)	1.5 (7)	88.9 (425)	6.7 (32)
Female	0.0 (0)	0.0 (0)	86.8 (66)	13.2 (10)
Male	3.6 (11)	1.0 (3)	91.8 (280)	3.6 (11)
Black/African/ African American	4.4 (1)	0.0 (0)	95.7 (22)	0.0 (0)
White/Caucasian	2.6 (6)	0.9 (2)	89.5 (204)	7.0 (16)
Latino/Hispanic	0.0 (0)	0.0 (0)	100.0 (29)	0.0 (0)
Asian/East Asian/ South Asian	2.8 (2)	1.4 (1)	90.1 (64)	5.6 (4)
CT surgery workforce decision makers	2.1 (2)	1.1 (1)	94.7 (89)	2.1 (2)

CT, cardiothoracic; N/A, not applicable.

medical education.[2,4,17] An element of social desirability may limit the extent to which explicitly biased views are expressed.[5] One explanation for STS members' self-reported cultural dexterity, despite published evidence of a lack of effective cultural dexterity in other health care provider populations, may be the Dunning-Kruger Effect. The Dunning-Kruger Effect identifies a cognitive "blind spot," where individuals with a deficit (in this case cultural dexterity) fail to acknowledge that deficit, and overestimate competence (in this case cultural competence).[18]

Summary

Bias is an uncomfortable topic. Its presence in a specialty that prides itself on attention to detail, excellence in clinical outcomes, and hierarchal advancement predicated on merit seems unfathomable. However, on the basis of our recent climate survey, many of our members, especially women and African Americans, experience bias from their own colleagues. Unfortunately, this is no different from experiences of women and UIMs in other health care specialties. Everyone possesses elements of implicit bias.

The difficulty lies not in documenting bias but in the self-reflection required to identify bias within ourselves. The latter of which runs counter to the fact that most physicians view themselves as benevolent caretakers of those in need.[19] This bias may manifest itself in mistaking a UIM trainee for a nurse or nonmedical doctor, "complementing" an African American colleague on their verbal articulation or robust vocabulary, repeatedly referring to a resident of color by the name of another resident of color, not speaking up when no interviewees

for a fellowship or key staff position are female or UIM candidates, or participating in a scientific panel that is all male.

The STS acknowledges the ubiquity of implicit bias, and the Workforce on Diversity and Inclusion's mission is to assist STS members in that difficult self-reflection. For those members who endeavor to improve their immediate environment, through inclusion, and the support and sponsorship of diverse colleagues, the Workforce has coming on the horizon toolsets to make those endeavors successful.

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INVITED COMMENTARY

The Society of Thoracic Surgeons evolved in 1964 to offer all thoracic surgeons an opportunity to participate actively in a member organization. In 2017, recognizing responsibilities and realities as a member organization, the STS formed an ad hoc Taskforce on Diversity and Inclusion. With energy, academic commitment, and focus, this group has evolved into a workforce that is actively gathering data and creating information for all of us to review, recognize, and understand.

The report[1] in this issue of *The Annals of Thoracic Surgery* is an early and thoughtful survey tabulation and commentary intended to address sensitive issues and to open the door to understanding our current realities, with a plan to further recognition of our current state and the importance of a diverse specialty for the patients we serve.

Although we are more comfortable reading about adjuvant therapy for pulmonary or esophageal neoplasms, transcatheter aortic valve replacement trials, mitral repair outcomes or single ventricle realities, understanding our specialty's membership, the opportunities we have, and societal responsibilities has an importance that we might not recognize consistently.

This workforce report informs us of the reality of "gender directed implicit and explicit bias" and the disparities noted in medical education, surgical education, and training and leadership roles. Specifically, the report calls out the limited number of women in leadership

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