

# Lofty goals and strategic plans are not enough to achieve and maintain a diverse workforce: an American Association for the Surgery of Trauma Diversity, Equity, and Inclusion Committee conversation

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## ABSTRACT

The American Association for the Surgery of Trauma Diversity, Equity, and Inclusion (DEI) Ad Hoc Committee organized a luncheon symposium with a distinguished panel of experts to discuss how to ensure a diverse surgical workforce. The panelists discussed the current state of DEI efforts within surgical departments and societal demographic changes that inform and necessitate surgical workforce adaptations. Concrete recommendations included the following: obtain internal data, establish DEI committee, include bias training, review hiring and compensation practices, support the department members doing the DEI work, commit adequate funding, be intentional with DEI efforts, and develop and support alternate pathways for promotion and tenure.

## INTRODUCTION

The COVID-19 outbreak arising from SARS-CoV-2 was declared a global pandemic by the WHO on March 11, 2020.<sup>1</sup> State and local governments, healthcare organizations, universities, and medical specialty societies scrambled to adapt to rapidly changing guidelines from the Centers for Disease Control and Prevention.<sup>2</sup> The Board of Managers of the American Association for the Surgery of Trauma (AAST) announced on June 12, 2020 that the 79th Annual Meeting would be held virtually. The Diversity, Equity, and Inclusion (DEI) Ad Hoc Committee organized a luncheon symposium with a distinguished panel of experts to discuss how to ensure a diverse surgical workforce. The ‘conversation’ that follows attempts to capture not only the content, but the feelings and flavor of that virtual symposium on September 10, 2020.

## CURRENT STATE OF DIVERSITY

### Michaela A West, MD, PhD, Minneapolis

This panel was brought together to talk about achieving and maintaining a diverse surgical workforce. Specifically, we will try to address the question of why lofty goals and strategic plans are not enough. Dr Berry will lead off our discussion with an overview of the current state of affairs.

### Cherisse Berry, MD, New York

America is changing. The country was about 80% White in the 1950s, but that number will decrease to 49.7% by the year 2045.<sup>3</sup> Those changing demographics will be reflected in the patients we care for. But do we see those demographic changes reflected within academic surgery at the level of our medical students, residents, fellows, faculty, and leadership? Under-represented minorities (URMs) make up less than 10% of the faculty in departments of surgery nationwide. Among almost 16 000 US surgical faculty, 2.7% identified as Black, 2.6% Latino/Hispanic, and 13% Asian. Based on the data, the answer is clearly no.<sup>4</sup>

### Brian H Williams, MD, Chicago

I was the first Black program director (PD) in the history of the program at my prior institution. Even though it was the largest surgery residency training program in the country, there was not a single Black resident. Shortly after I was named PD, one of my colleagues commented, “So I guess next year we’re going to look like Howard University.” That statement said a lot regarding attitudes about diversity. Was it a joke? Who knows, but it felt like the mere thought of increasing diversity within the program gave some people pause.

### Sharon M Henry, MD, Baltimore

Ideally, leadership would recognize when inequities occur regarding opportunities for advancement and promotion. The reality is that our leadership often either fails to recognize, or fails to focus on, the discrepancy. It is hard to believe that they are unrecognized but maybe they are just not a focus.

### Karen J Brasel, MD, MPH, Portland

Not recognizing the importance of a diverse workforce is very short-sighted, because those institutions, those departments, those organizations that do not have diversity, inclusion, equity as a core mission and value, they are going to lose the talent pool.<sup>5</sup> They are going to lose.

### Jeffrey Upperman, MD, Nashville

Could you imagine a major sports team basing their roster on who they know in their luxury suite? Can you imagine what that team looks like? If you have a community, a population, that you need to serve then you need to get team members who can deal with that population in a smart and effective way. Diversity and inclusion result in a better product.<sup>6</sup>

## INCREASING INCLUSIVITY

### Dr West

Clearly, academic surgery does not currently look like America and there have been several projections indicating that it could take more than a hundred years to change the situation based on recent trends.<sup>7</sup> Drs Henry and Upperman both mentioned that many institutions express a desire to change, but lament the absence of qualified candidates. How does that change?

### Dr Brasel

Too many times I have been a part of a group of people, a committee, that is looking at the next committee openings or looking for who is going to be considered for leadership. People tend to recommend their mentees, their trainees, their junior partners, perhaps their friends or the people they know. It is important to understand that privilege does not come with age. There are a lot of bright young faculty, young trainees, who have incredible ideas. And I think we need to be willing to take risks and invite them to the leadership table.

### Dr Williams

The current crop of students and trainees are much more socially conscious,<sup>8</sup> and courageous, certainly more than I was at their stage. They are demanding diversity and equity and inclusion. It is coming from a variety of voices and backgrounds because this is what they see, what they have experienced, and what they expect going forward.

### Dr Henry

When I walk down the halls of my hospital, I see the walls papered with banners announcing the institution's commitment to respect, integrity, teamwork and collaboration, excellence and innovation, diversity and inclusion. Often that messaging is in response to Black History Month or Pride Month, but while that messaging is important, we need to celebrate those events on a daily basis.

### Dr Upperman

We talk about banners on walls, in offices, etc, as Dr Henry so eloquently put it. The efforts to address diversity need to be real, as real as your research office or your patent and innovation office. Nobody talks to that strategic innovation officer or that patent officer saying, "Heard a lot of great ideas today." No, they want to know what National Institutes of Health (NIH) grants have been won, what money is in the bank, where are my indirect costs. They want real metrics.

## TACKLING STRUCTURAL BARRIERS

### Dr West

A number of people have asked how can we begin to dismantle the structural racism inherent in our medical systems and curriculum?

### Dr Williams

As we meet, it was only 3 months ago that George Floyd happened<sup>9</sup>—only 3 months, but it seems like 10 years. I think

we can see things changing in academia.<sup>10</sup> Those of us in positions of leadership and power really must support those doing the DEI work. Often they do not get the same sort of support or recognition as someone who gets a huge grant or puts out 20 peer-reviewed papers. If we do not train a variety of different backgrounds, experiences and voices, our views of treating patients become limited. Let us support DEI work to the same degree as those doing research, admin work, or clinical excellence.

### Dr Henry

Dr Williams talked about that national disruption that we have all experienced, but oftentimes something has to happen at our own 'ivory towers' to bring an issue to light. In my institution, it came from a very public lawsuit alleging sexual harassment that produced a change in priorities of the medical school and the hospital.<sup>11</sup> Leadership became committed to improving culture around DEI. They had town hall meetings and focus groups were assembled to get data to find out where we stood and to determine where we needed to be. Some of what happened was a lot of 'window dressing', but there were some meaningful shifts, as well. A culture transformative initiative was started and they developed a strategic plan with a timeline.<sup>12</sup>

### Dr West

Ideally, we should not need diversity, inclusion committees anywhere. We need them because of structural problems. How do we change that?

### Dr Williams

I will start that. Clearly, our medical education is lacking in teaching our students about the legacy of institutional and structural racism. That lack of education leads to trainees going into the workforce without recognizing the challenges and the barriers that many of our patients deal with, particularly underserved and under-represented minorities.

### Dr Upperman

Dr Williams raised an interesting point. It is important that we tell the whole story. For example, Vivien Thomas<sup>13</sup> was born 110 years ago last August and he ran Alfred Blalock's laboratory at Vanderbilt and later Johns Hopkins. He essentially coached Dr Blalock through the pioneering heart operation that bears Blalock's name, as well as advancing knowledge of shock and crush injury. But very few have heard his history. The discovery of the structure of DNA is another example, Watson and Crick won the Nobel prize, but Rosalind Franklin, who was indispensable to that discovery, was left off the accolades.<sup>14</sup> The *whole* story shows the persistence, brilliance, and contributions of all of our people.

### Dr Berry

All departments of surgery should do a deep dive and really discover their own internal data. You cannot effect change if you do not know the data. Key actions not only involve a systematic review and transparency of hiring and promotion policies but include publicizing the analysis of the equity metrics for each division and for the department in an effort to achieve transparency and accountability.<sup>15</sup>

## 'OBJECTIVE' TESTING?

### Dr West

Some have suggested that one way to avoid bias is through the use of purportedly objective measures, like the MCAT or USMLE.<sup>16</sup>

There has been quite a bit of discussion on social media and many organizations are moving away from them.<sup>17</sup> Let us just hit that for a second, what do panelists think about such measures?

### Dr Berry

It really does not work to only look at one particular aspect even if it is considered objective. We know there is structural racism within all of those standardized tests.<sup>18</sup> Furthermore, there are good data showing that such tests do not define or predict how someone will do in their training and on their boards.<sup>19</sup>

### Dr Henry

The USMLE recently announced that they are moving to pass/fail.<sup>16</sup> So maybe that will help with that issue. Our admissions committee is asking, “what are we going to use to sort the resident applicants?” These are tough questions. For example, I am mentoring a young woman who is one of the best third-year students I have seen and she has been advised that she probably should not apply to surgery because her scores were too low. I have told her differently, but these are real things that influence how students make decisions about their futures. They may say, “it’s too hard” or “there are too many road blocks” and we are going to miss out on some really good people.

### Dr Brasel

I agree with Dr Henry, my admission committee also asks, “what *are* we going to use?” From the perspective of PDs, and I am one, those cut-offs make it easy. But, should we want to make it easy or make it excellent? As Dr Upperman said, we have got to go find the talent. Finding talent is hard. It takes time. It should not be a cut-off filter screen. There are other ways to evaluate talent and understand and predict who is going to be a fantastic surgeon.<sup>5</sup>

## THE MINORITY TAX

### Dr West

I agree and going back to Dr Upperman’s analogy about sports teams, we need different talents in different positions. A lot of different talents do the best job of taking care of our patients. We need to fill out the team. Let me ask the panel another question that may impact many directly. If you are that highest-ranked minority in your organization, many have lamented getting tapped to be on every committee, every policy thing and every recruitment dinner. How do you deal with that?

### Dr Berry

You are describing what has been dubbed ‘the minority tax’,<sup>20</sup> where you may be one of a handful, or even the only one, doing *all* those things. Things you know are important but which often are not recognized or rewarded. They may also be taking away from other tangible things like research, grants, because all your time is focused on things that are not thought of as important enough to reward. One possible fix is to go back to those equity metrics I talked about earlier. Participating in DEI efforts contributes positively to the mission and should be included in promotion and compensation metrics.

### Dr Henry

I agree with Dr Berry, but you may be the only ‘fill in the blank’ therefore you can represent the opinion for all ‘fill in the blanks’ and that is exhausting. We all have stories where something happens, or is said, and every head snaps to you to ‘get your read’. It can be tiresome, but in some ways we do sort of have a

responsibility to uphold the place. However, it seems unfair to be labeled for that all the time.

### Dr Upperman

You are absolutely right, Dr Henry. That was sort of the situation I was caught in too. The reality is that when I look at any organization, it is like what is driving the mission and I want to be a part of that. I have been NIH funded and I knew early on from the politics of academic healthcare that funding was what beat the drum. If you give it your time, it needs to count for something.

### Dr Williams

I am conflicted about this because I think a personal obligation to do that work and when asked I always give it 100%. When I was younger, I also got pressured from senior folks about why it is important to do this work. I am asked over and over to do this stuff and I need to protect my time to do the things I am asked to do by my institution. I can commit but no longer at the same level that I did in the past. And I think, in a way, that I am kind of turning my back on the mission in some respects. I am left moving forward with trepidation, trying to do enough without taking away from my family and my other professional obligations, but not letting down the people I always talked about reaching back to pull up.

### Dr West

You do not want to turn your back on the mission but *you* cannot carry the mission on your back, either.

### Dr Williams

Oh, tweet that out!

## THE VALUE OF DIVERSITY

### Dr West

There could be some places where your efforts may be more important and I am thinking about the NIH grants that Dr Upperman mentioned. There is a real paucity of URM on study sections<sup>21</sup> and promotion and tenure committees.<sup>22</sup> Those could be an opportunity to encourage people that being ‘in the room where it happens’ is more important than going to all these other things that possibly drain you more. You have a really important voice and to try to make that count. Several people had talked about the lack of resources to get some of these things done. As trauma surgeons, we think of ourselves as amazing ‘outside-the-box’ problem solvers who can deal with difficult problems. What can we do with that great capacity to adapt and identify problems and analyze the data to help make that case for return on investment from investing in diversity?

### Dr Henry

I mentioned one very tangible example earlier because no organization wants to spend millions of dollars in a lawsuit. That can be mitigated or avoided if you: train your people in how to interact with each other respectfully, understand who should be at the table, that everybody has a right to be at the table, etc. That will help to keep you out of court.<sup>23</sup>

### Dr Upperman

I was just going to add that when you do get invited to certain rooms, you see what money does and how it frequently gets thrown away. In essence, money should be available for a lot of these important things. There is no question about why we

### Box 1 List of actions that support achieving and maintaining a diverse surgical workforce

1. Obtain internal data.
  - Gender-based compensation
  - Minority representation
2. Establish a department Diversity, Equity, and Inclusion (DEI) Committee.
3. Bias training
  - Anti-discrimination
  - LGBTQ+ awareness
  - Implicit bias
4. Systematic review of hiring, compensation, etc
5. Departmental SWOT analysis
6. Support those doing the DEI work.
  - Administrative, financial, social
7. Sponsor and actively promote under-represented minorities (mentoring is not enough).
  - OK to 'take risks' on young people
8. Publish/distribute a departmental/division level 'dashboard'.
  - Supports transparency and accountability
9. Develop and support alternate pathways for promotion (and/or tenure).
10. Commit adequate funding to DEI initiatives
  - 'Be smart' with financial support
  - Accountability
11. Be *intentional* with DEI efforts
  - Actively seek out the right people (do not wait for them to apply)

LGBTQ+, lesbian, gay, bisexual, transgender, queer, and other sexual preferences and identities; SWOT, strengths, weaknesses, opportunities, threats.

should or should not do it. I think it comes back to being intentional, thoughtful, and really trying to win.

### SUCCESSFUL STRATEGIES FOR A DIVERSE SURGICAL WORKFORCE

#### Dr West

Organizations and institutions have articulated lofty goals and those are important, but can we finish off by enumerating things that panelists have found, or believe, help to get there? Specifically, what works to achieve and maintain a diverse surgical workforce? (see [box 1](#)).

#### Dr Brasel

I really think that the sponsorship, finding the talent, is key. When I was coming up in academic medicine, there was a 'Worthy Women' list.<sup>24</sup> The intent of the list was to create a snowball effect where those in positions of power would recommend women for any and every opportunity that came along, knowing that if sponsorship did not happen then those roles were going to men. It is incumbent on many of us to use and leverage our ability to point out that talent and push them forward.

#### Dr Henry

Michael Bloomberg reportedly just gave \$100 million to Historically Black Colleges and Universities (HBCUs) to increase the number of Black physicians in the pipeline.<sup>25</sup> You really have to start in the schools and get URM's interested in sciences and increase our pipeline.<sup>4 26</sup> Our institution developed a strategic

plan with a specific timeline. Basic things like leadership bias training should be instituted.<sup>27</sup> Medical schools should address subjects like structural racism in their curriculum.<sup>28</sup> Dashboards can be very helpful to monitor the conditions within an institution and organizations must consider alternative pathways for promotion.<sup>29</sup>

#### Dr Upperman

I agree that money is needed but you need to be smart about it. We are not only doing bias training at my institution, but then we are also studying its impact.<sup>30</sup> The talent is out there, but it is also critical that we be intentional. If you understand what you are looking for and put the resources behind it, you will find the talent. There are probably 20 Dr Williams out there that you can find, but you need to be intentional.

#### Dr Williams

In addition to the importance of the financial support that has been mentioned, we need to also focus on the infrastructure to do this work and to make it effective and sustainable going forward.<sup>31</sup> Those of us in positions of leadership and power really must support the people that do the work of DEI. In the end, it is also better for our patients whose demographics are changing, so it must reflect who we see.

#### Dr Berry

Departments of surgery should do a deep dive and really know their own internal data.<sup>15</sup> You cannot affect change if you do not know the data. Knowing the gender and racial, ethnic composition of the residents, faculty, division, section chiefs, and vice-chairs within the department of surgery and how those numbers compare with the American Association of Medical Colleges (AAMC) national benchmarks is really the first step in identifying opportunities for improvement.<sup>32</sup> Create a departmental equity committee and define equity metrics for every division to ensure transparency and accountability. Important metrics include the following: (1) an analysis of URM faculty and leadership representation<sup>32</sup>; (2) anti-racist and implicit bias training<sup>33</sup>; (3) cultural competency training<sup>34</sup>; (4) ensure that divisions have a system for collecting faculty reports of racism or discrimination and a clear plan for addressing reported problems; (5) racial, ethnic, gender diversity in speakers for grand rounds or invited lectureships; (6) diversity in nominations for awards; and (7) analysis of equity for faculty salaries.<sup>35</sup>

#### Dr West

This has been a terrific conversation and hopefully a good starting point. I would like to thank all of the panelists for their willingness to share insights, passion, and knowledge. We also thank the AAST for supporting this panel session and the DEI Committee members for their dedication to advancing discussion of this important topic.

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#### REFERENCES

- Cucinotta D, Vanelli M. WHO Declares COVID-19 a pandemic. *Acta Biomed* 2020;91:157–60.
- Centers for Disease Control. Interim Guidance: Get Your Mass Gatherings or Large Community Events Ready for Coronavirus Disease 2019 (COVID-19). [https://www.cdc.gov/coronavirus/2019-ncov/downloads/Mass-Gatherings-Documents\\_FINAL.pdf](https://www.cdc.gov/coronavirus/2019-ncov/downloads/Mass-Gatherings-Documents_FINAL.pdf).
- Frey WH. The US will become 'minority white' in 2045, Census projects. 2018.
- Keshinro A, Frangos S, Berman RS, DiMaggio C, Klein MJ, Bukur M, Welcome AU, Pachter HL, Berry C. Underrepresented minorities in surgical residencies: where are they? A call to action to increase the pipeline. *Ann Surg* 2020;272:512–20.
- APDS Diversity and Inclusion Toolkit. <https://apds.org/program-directors/apds-diversity-and-inclusion-toolkit/>.
- Delivering through diversity. @mckinsey. <https://www.mckinsey.com/business-functions/organization/our-insights/delivering-through-diversity>.
- Abelson JS, Symer MM, Yeo HL, Butler PD, Dolan PT, Moo TA, Watkins AC. Surgical time out: our counts are still short on racial diversity in academic surgery. *Am J Surg* 2018;215:542–8.
- Johnson O, Chattaraman V. Conceptualization and measurement of millennial's social signaling and self-signaling for socially responsible consumption. *J Consumer Behav* 2019;18:32–42.
- How George Floyd Died, and What Happened Next. 2020
- Kruse SD, Hackmann DG, Lindle JC. Academic leadership during a pandemic: department heads leading with a focus on equity. *Front Educ* 2020;5.
- Richman T, Bowie L. Lawsuit claims University of Maryland medical school ignored sexual harassment complaints. Baltimore Sun. 2018. <https://www.baltimoresun.com/education/bs-md-um-sexual-harrasment-20180919-story.html> (29 Oct 2021).
- University of Maryland University Policies. Policy Number: VI-1.60(A), University of Maryland Policy and Procedures on Sexual Harassment and Other Sexual Misconduct. (Amended and approved on interim basis August 23, 2021). <https://policies.umd.edu/policy/b2b4c087-8d3f-4a09-bb23-03d9562caa92/> (28 Oct 2021).
- American College of Cardiology. Just one more | Vivien Thomas: remembering a pioneering legend, 2021.
- Maddox B. The double helix and the 'wronged heroine'. *Nature* 2003;421:407–8.
- West MA, Hwang S, Maier RV, Ahuja N, Angelos P, Bass BL, Brasel KJ, Chen H, Davis KA, Eberlein TJ, et al. Ensuring equity, diversity, and inclusion in academic surgery: an American surgical association white paper. *Ann Surg* 2018;268:403–7.
- United States Medical Licensing Examination | Invitational Conference on USMLE Scoring. <https://www.usmle.org/incus/>.
- Kendi IX. Why Standardized Tests Have Standardized Postracial Ideology. *Academe*. American Association of University Professors. 2016. <https://www.aaup.org/article/why-standardized-tests-have-standardized-postracialideology#.YN3iwthKiUl>.
- Valenzuela F, Romero Arenas MA. Underrepresented in surgery: (lack of) diversity in academic surgery faculty. *J Surg Res* 2020;254:S0022-4804(20)30228-6:170–4.
- Prober CG, Kolars JC, First LR, Melnick DE. A Plea to Reassess the Role of United States Medical Licensing Examination Step 1 Scores in Residency Selection. *Acad Med* 2016;91:12–5.
- Campbell KM, Rodríguez JE. Addressing the minority tax: perspectives from two diversity leaders on building minority faculty success in academic medicine. *Acad Med* 2019;94:1854–7.
- @annavolerman. Women need to be equally represented in NIH study sections - STAT. @statnews. <https://www.statnews.com/2021/02/15/nih-ensure-women-equally-represented-study-sections-grant-funding-decisions/>.
- Valsangkar NP, Zimmers TA, Kim BJ, Blanton C, Joshi MM, Bell TM, Nakeeb A, Dunnington GL, Koniaris LG. Determining the drivers of academic success in surgery: an analysis of 3,850 faculty. *PLoS One* 2015;10:e0131678.
- Johnson PA, Widnall SE, Benya FF. Committee on the Impacts of Sexual Harassment in Academia Committee on Women in Science, Engineering, and Medicine Policy and Global Affairs National Academies of Sciences, Engineering, and Medicine. Sexual Harassment of Women. Climate, culture, and consequences in academic sciences, engineering, and medicine. Washington, DC: The National Academies Press, 2021.
- Numann P. Worthy Women List: An enduring legacy to promote deserving women that was started by Olga Jonasson, Kathryn Anderson, and Patricia Numann in the 1980's, 2021.
- @nytimes. Michael Bloomberg to Give \$100 Million to Historically Black Medical Schools. <https://www.nytimes.com/2020/09/03/business/dealbook/bloomberg-black-medical-schools-donation.html>.
- Williams-Karnesky RL, Kashyap MV, Courtney C. Shoring up the pipeline: Increasing diversity in surgery by enhancing equity and inclusion in the surgical learning environment. *Bulletin of the American College of Surgeons*. American College of Surgeons. 2021. <https://bulletin.facs.org/2021/01/shoring-up-the-pipeline-increasing-diversity-in-surgery-by-enhancing-equity-and-inclusion-in-the-surgical-learning-environment/#>.
- Onyeador IN, Hudson S-kiera TJ, Lewis NA. Moving beyond implicit bias training: policy insights for increasing organizational diversity. *Policy Insights Behav Brain Sci* 2021;8:19–26.
- Ona FF, Amutah-Onukagha NN, Asemamaw R, Schlaff AL. Struggles and tensions in Antiracism education in medical school: lessons learned. *Acad Med* 2020;95:S163–8.
- Glazer G, Tobias B, Mentzel T. Increasing healthcare workforce diversity: urban universities as catalysts for change. *J Prof Nurs* 2018;34:S8755-7223(17)30059-5:239–44.
- Racial Equity Task Force releases initial recommendations. VUMC Reporter. Vanderbilt University. 2021. <https://news.vumc.org/2021/06/21/racial-equity-task-force-releases-initial-recommendations/>.
- Edmondson AC. Wicked Problem Solvers. In: *Harvard business review*. Harvard Business Publishing, 2016: Vol. 94. 52–9.
- @AAMCtoday. Diversity in Medicine: Facts and Figures 2019. 2021
- Bias HPI. Project Implicit. 2018. <https://www.projectimplicit.net/> 2021.
- Vasquez Guzman CE, Sussman AL, Kano M, Getrich CM, Williams RL. A comparative case study analysis of cultural competence training at 15 U.S. medical schools. *Acad Med* 2021;96:894–9.
- Sangji NF, Fuentes E, Donelan K, Cropano C, King D. Gender disparity in trauma surgery: compensation, practice patterns, personal life, and wellness. *J Surg Res* 2020;250:S0022-4804(20)30042-1:179–87.