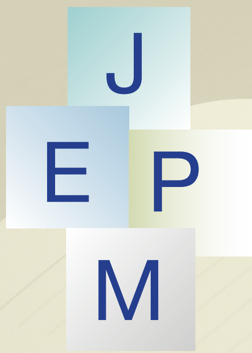

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Original Research

Enhancing Anesthesiology: A Survey of Diversity, Equity, and Inclusion in Residency Curricula

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Introduction

Diversity, equity, and inclusion (DEI) education is a growing focus in graduate medical education (GME) to train a workforce equipped to lessen health disparities for racial and ethnic minorities, mitigate harmful biases, and act in ways that promote inclusivity and belonging for patients and peers.[1,2] Furthermore, engaging with diverse perspectives during anesthesiology training enhances residents' understanding and awareness of social determinants of health, which can foster a broader, more comprehensive approach to patient care.[1,3] Despite national efforts to increase diversity in clinical medicine, Black, Hispanic, Pacific Islander, Native Hawaiian, and American Indian physicians remain significantly underrepresented, especially in anesthesiology where these groups represent 6% to 10% of the specialty.[4,5] These groups, collectively known as underrepresented in medicine (URiMs), make up more than one-third of the US population.[6] In addition, among practicing anesthesiologists, there are also significant gender differences (63.4% men vs 36.6% women), especially in leadership.[7] A lack of diversity can limit perspectives in anesthetic care, which may contribute to ongoing health care disparities.[2,8,9] Understanding health care disparities is essential for providing equitable care, and by addressing them, we can promote more inclusive practices in anesthesiology.[10]

Disparities in patient care and outcomes are well-documented in anesthesiology.[11] Studies in obstetric anesthesiology show that women from racial/ethnic minority groups are less likely to receive neuraxial labor analgesia, increasing the risk of postpartum maternal morbidity and mortality.[12,13] Andreae and colleagues[14] reported that anesthesiologists administered fewer antiemetics to patients with lower socioeconomic status. Hoffman et al[9] reported that many residents and medical students falsely believe in biological differences between Black and White individuals, predicting bias in pain perception and treatment recommendation. These studies emphasize the need for bias reduction and DEI training in medical school, residency, and beyond.[4]

In 2020, the Accreditation Council for Graduate Medical Education (ACGME) released Common Program Requirements for residency programs to address the importance of DEI education in medical education.[15] These requirements stress the importance of respect and responsiveness to diverse populations, including factors such as gender, culture, race, and socioeconomic status. Given the growing emphasis on diversity and health equity, the American Board of Anesthesiology, like other specialty accreditation bodies, is incorporating these topics into competency assessments and continuing education requirements.[10] Integrating these principles within residency education prepares anesthesiologists to meet the needs of all patients and fosters inclusive practices.[10]

Studies have assessed the implementation of DEI training in residency programs such as family medicine, internal medicine, and pediatrics.[15–17] Despite calls for implementation, the landscape of DEI curricula across anesthesiology residencies is still poorly understood.[8] DEI education can vary greatly across institutions as evidence-based strategies and best practices remain underreported.[15] Also, outcomes of DEI curricula are not always well evaluated, and existing measures can range widely, complicating the development of better recommendations.[18,19] The objective of this study was to assess the current state of DEI curricula across anesthesiology residency programs by evaluating the extent to which DEI education is incorporated into anesthesiology residency training, including specific topics covered, delivery methods, and how outcomes are assessed.

Materials and Methods

We developed a cross-sectional survey to assess DEI curriculum, educational methods, curriculum content, barriers and challenges to curriculum implementation, and outcomes assessment in ACGME-accredited anesthesiology residency programs across the United States. The survey was designed based on literature review of existing surveys to gather information about curriculum elements

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and educational methods, challenges to initiation, and outcome assessment.[3,22] This study was approved by the Washington University in St Louis Institutional Review Board (202307122). The recruitment email included consent information and completion of the survey represented informed consent.

An anonymous electronic survey (see Supplemental Online Material, Appendix 1) consisting of closed and open-ended questions was created by 2 of the authors (G.H. and C.W.) and reviewed by all authors for consensus and content validity. It was tested by colleagues in the Department of Anesthesiology who provided feedback on the relevance and clarity of each item. The survey was delivered via an online survey platform, Research Electronic Data Capture (REDCap), and data were collected using REDCap electronic data capture tools hosted by the Washington University in St Louis.[20,21] The survey was disseminated via the Society of Academic Associations of Anesthesiology and Perioperative Medicine (SAAAPM) Association of Anesthesiology Core Program Directors (AACPD) mailing list and distributed to publicly available emails of program directors and program coordinators in the United States. Program directors reported on the presence of DEI curriculum, educational methods, curriculum content, barriers and challenges to implementation, and outcomes assessment. The survey also included a field for participants to provide additional comments, or to discuss topics not otherwise addressed in the survey. The survey was open for 10 weeks between August 2023 and October 2023. Three email reminders were sent out to program directors during this period. Participation was voluntary, anonymous, and there was no compensation provided.

A 5-point Likert scale was used in the survey to assess anesthesiology residency programs' attitudes and perceptions regarding the implementation and importance of DEI education. This scale allowed for the quantification of responses across a spectrum, ranging from *strongly agree* to *strongly disagree*, enabling a nuanced understanding of program characteristics and departmental commitment to DEI initiatives. Univariate and bivariate analysis models were used to generate a descriptive report of responses. Survey answers were reported as counts and proportions and missing data for each survey question were not included in the final calculations of the results. All data analyses were conducted in Microsoft Excel version 2024 and REDCap software. Content analysis from open-ended responses highlighted significant patterns that were categorized into broader themes, revealing underlying sentiments and attitudes that may not have emerged through quantitative methods alone.

Results

The survey was initially emailed to the SAAAPM AACPD mailing list and received 15 responses. The survey was then emailed to 165 publicly available email addresses of program directors and program coordinators. Six were undeliverable for a total of 159 valid emails. A total of 53 respondents yielded a response rate of 32%. Of the programs that responded, 67.9% were in an urban area, 30.2% in a suburban area, and 1.9% in a rural area (Table 1). The primary practice setting for 71.7% of programs were university-based, 18.9% were community-based university-associated, and 9.4% were community-based programs. A DEI curriculum was reported in 64.2% of programs. Of the 19 programs without a DEI curriculum, 68.4% indicated an interest in implementing one.

Survey responses about the importance of DEI education and barriers to implementation are available in Table 1. Program directors rated their agreement with the following statement: "DEI is important for our residency program." Most participants selected *strongly agree* (45.3%), followed by *agree* (35.8%), *strongly disagree* (15.1%), *neutral* (3.8%), and *disagree* (0%).

Barriers to implementing a DEI curriculum were reported in 46.5% of programs. The most common barriers were educational expertise (73.7%), resident time (68.4%), faculty time (63.2%), financial support (36.8%), faculty buy-in (26.3%), leadership buy-in (26.3%), resident buy-in (21.2%), and space to host activities (10.5%). There were 10.5% of respondents who also selected *other* and elaborated that national and state political actions and social trends were also barriers to implementation.

Of the 34 programs that reported having a DEI curriculum, 26 (76%) shared characteristics of their efforts (Table 2). The median year of implementation for these programs was 2020 (range, 2010–2022), and the median hours spent per academic year on DEI content was 2.0 to 3.5 hours (range, 1–20). Most programs spent the same number of hours on DEI content per postgraduate year across residency. The most common formats of DEI training used were case-based discussion (65%), web-based learning (50%), classroom learning (35%), simulations (35%), and interactive workshops (30%). Other training formats included journal club, book club, confessions, and Theatre of the Oppressed (ie, a performance-based educational workshop in which participants role-play in confrontational scenarios).

From the DEI topics listed, the most frequently addressed were bias (96.2%), health disparities (92.3%), social determinants of health (84.6%), structural determinants of health (73.1), systemic racism (69.2%), cultural humility (46.2%), health literacy (46.2%), bystander/upstander training (34.6%), and intersectionality (15.4%). Only 11.5% (n = 3) of programs assessed outcomes from their curricula. Of the 3 programs that assessed outcomes, 1 program used pre-/post-participation surveys, observed structured clinical examinations (OSCE)s, structured case method assignments, and quality improvement mock projects that integrate social determinants of health; another used the ACGME residency survey[22]; and the third program used post-participation surveys. Programs responded to the open-response question about context with barriers to implementation including the current political climate and faculty/resident buy-in (Table 3).

Discussion

The implementation of DEI curricula in anesthesiology residency programs remains insufficiently characterized.[8,23] Variability in the integration of DEI training across GME programs persists, with limited evidence-based strategies or best practices available to guide the development of effective curricula for anesthesiology trainees.[24] Our study reveals that DEI

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curricula in anesthesiology residencies are still emerging and heterogeneous in nature, with numerous barriers to implementation and limited systematic evaluation of their outcomes.

Although the ACGME publishes Common Program Requirements for residency programs, their guidelines centered around DEI are only that residents must demonstrate competence in respect and responsiveness to diverse patient populations, without specifying how programs are to ensure that. Thus, as only 64.2% of programs surveyed reported having a DEI curriculum, many programs still have opportunity for growth in their efforts. Most DEI curricula were implemented in the past 5 years, as the median year of implementation for programs surveyed was 2020. The year 2020 was pivotal, with the national focus on a pandemic and increasing racial injustices likely serving as a catalyst for a renewed emphasis and training on diversity and belonging within GME.[25] Although medical education literature is sparse in terms of DEI curriculum research, it is increasing with greater sociocultural awareness of the importance of these issues and changes to the ACGME Common Program Requirements.[10,12] Therefore, it is possible that many more educational interventions are in their early phases of development and implementation.

Currently, DEI work in academic medicine has a wide breadth of definitions and manifestations, with dramatic variability in departmental support, resources, and scholarly efforts.[24] Of the programs that did not have a DEI curriculum, including equal numbers of university versus community-based programs, the largest barriers to implementation included educational expertise and resident/faculty time. This aligns with prior research that has similarly demonstrated that a lack of adequate staffing, coordinated efforts, and insufficient funding limit the effectiveness of diversity initiatives.[24,26,27] Open text responses also noted implementation challenges from resident/faculty commitment and local political context. Disagreements over the importance of DEI training were reflected in this study, with 15.1% of respondents strongly disagreeing with the statement "DEI is important for our residency program." This was also reflected in the open-response questions in which some program directors expressed doubts about the effectiveness of DEI curricula (per 1 participant, "some bias/discrimination is so well engrained you will not be able to teach it out of people") and politicization of DEI initiatives ("DEI has become a Trojan horse for far-left political indoctrination"). Thus, the value of DEI efforts must be effectively measured to support advocacy for techniques and resources.

Following the Supreme Court's decision to eliminate the consideration of racial status in college admissions, there has been increased scrutiny and discussion around DEI initiatives, particularly at the state level. As of 2024, at least 38 states have introduced anti-DEI legislation, raising concern for how this may affect residency DEI education based on the location of training.[28] These legislative efforts are seen by some as an inappropriate expansion of the ruling's implications, extending beyond college admissions to broader areas such as funding, hiring practices, and educational programming.

Although recent legislative efforts to limit DEI initiatives may raise concerns, it is important to recognize that it is essential to prepare health care professionals to serve diverse populations and address health disparities. An understanding of the nature and causes of health disparities, recognition of the impact of implicit biases in both medical education and clinical practice, and evidence demonstrating the positive health outcomes associated with efforts to raise awareness and drive change in these areas constitute evidence-based education. The broader medical community, including organizations like the Association of American Medical Colleges and the American Medical Association, strongly supports DEI education as a core component of medical training, emphasizing its role in improving patient care and fostering a more inclusive health care workforce.

To overcome political pressures in providing DEI training in medical education, it is essential to focus on DEI education as a fundamental component in preparing clinicians to move beyond systemic challenges and provide improved patient care by focusing on the quality and limitations of medical knowledge and identifying the true impact of medical evidence on at-risk as well as more broad populations of patients. Because DEI training emphasizes the positive impact on patient outcomes and clinical competence, they align with other medical education curricula best practices focused on patient and family-centered care, medical professionalism, medical ethics, and systems-based practice. Engaging a broad coalition of community or institutional partners, using data-driven evidence, and tailoring training to the institution's specific needs can help mitigate resistance. In addition, highlighting the ethical responsibility of health care professionals and focusing on effective, evidence-based approaches can shift the conversation from political controversy to professional development and patient-centered care.

To demonstrate the value of DEI in anesthesiology residency education, programs can align their DEI initiatives with ACGME program requirements, and the evidence-based benefits highlighted by national organizations such as the American Society of Anesthesiologists, Association of Anesthesiology Residents and Fellows, and the American Board of Anesthesiology. Integrating DEI into clinical training, patient interactions, and simulation exercises helps residents develop cultural competence and humility known to improve compliance, patient care, and outcomes. Strong institutional commitment, visible leadership, and mentorship support are essential to foster an inclusive environment. Continuous evaluation of DEI efforts through data collection, benchmarking, and collaboration within anesthesiology programs can highlight the impact on resident performance, best practices, and patient satisfaction.[29] Framing DEI as a core ethical value and professional responsibility, recognized by national medical organizations, reinforces its importance, ensuring anesthesiology residents are prepared to effectively care for diverse patient populations.

Finally, of programs surveyed, only 3 programs measured outcomes within their curricula. Not formally collecting outcome data may limit programs' ability to target

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the needs of their residents, recognize meaningful progress, and measure the value of DEI educational material. Of programs measuring outcomes, most are using Kirkpatrick level 1 and level 2 outcomes such as post-intervention satisfaction surveys and pre/post knowledge testing.[18,30] There is an opportunity to improve the assessment of outcomes by focusing on Kirkpatrick level 3 outcomes, for example using simulation and requiring scholarly output from learners. Only 1 program surveyed reported using assessments like OSCEs and a required social determinants of health quality improvement project by trainees. A strategy to address these concerns is to support scholarship in best practices for training residents in health disparities by measuring curriculum outcomes.

To effectively measure the impact of DEI education programs, residency programs can use a combination of quantitative and qualitative methods. Pre- and post-intervention surveys can be used to assess changes in participants' attitudes toward DEI, perceived institutional support, and behavioral shifts in both clinical and educational settings.[31] The RE-AIM framework (Reach, Effectiveness, Adoption, Implementation, and Maintenance) offers a comprehensive approach to evaluating program effectiveness, examining both short-term outcomes and the long-term sustainability of DEI initiatives.[32,33] In addition, qualitative feedback from follow-up interviews and focus groups can provide valuable insight into participants' experiences, perceived barriers, and areas for improvement. Quantitative institutional metrics, including diversity in leadership, recruitment, retention, and changes in health care outcomes (such as reductions in care disparities), should also be tracked to gauge the broader and long-term impact of DEI efforts.[24,34] Collectively, these evaluation strategies can provide data to better understand the value of DEI training programs, helping to advocate for continued investment in such initiatives.

Of the programs with DEI curricula, most addressed common DEI topics as recommended by the ACGME and used the same teaching formats. Programs can further consider implementation and measuring outcomes like acceptability or increased knowledge after novel evidence-based strategies, such as cultural immersion educational programs, perspective-taking and counter-stereotyping to address bias, journal clubs, and self-reflective writing.[18,19]

We acknowledge several limitations of our study. Our response rate of 32% limits our ability to draw generalized conclusions because of our small sample size, although the variations of responses suggest a broad spectrum of perspectives. Furthermore, the survey was sent through distribution to the SAAAPM list serve and then again through individual email. Because of the survey's anonymity, it is impossible to tell if program directors responded twice in the survey or if a program director and program coordinator completed the survey differently for one program. However, we believe this possibility is low because of the likelihood of respondents recognizing the survey, and the authors did not identify any duplicate responses during data analysis. We also acknowledge the possibility of response and selection bias. Programs with DEI initiatives may have been more likely to respond to showcase their efforts, whereas programs without such programming might have responded to justify the exclusion of this topic in their curriculum. With a 32% response rate, we were still able to gather important information about the current implementation and assessment of DEI curricula within anesthesiology residency programs.

To overcome common barriers to effective DEI education in anesthesiology residency programs, it is essential to integrate DEI content into the core curriculum and ensure it is not viewed as supplementary. Residency programs can embed topics such as cultural competence and humility, implicit bias, and patient-centered care within existing clinical rotations, didactic sessions, and simulation exercises. This integration not only aligns with ACGME competencies but also supports broader medical society goals toward health equity, which emphasizes the importance of preparing health care professionals to serve diverse patient populations. By dedicating protected time during weekly schedules or clinical rounds, residency programs can ensure that DEI education is provided alongside other core learning objectives, reinforcing its critical role in training well-rounded anesthesiologists.

Faculty and residents can further build DEI expertise through external courses, workshops, and certifications, with ongoing mentorship and leadership support to ensure consistent application of DEI principles throughout clinical training. Notable offerings like the Association of American Medical Colleges' Cultural Competence Education for Medical Students or the American Medical Association's Equity, Diversity, and Inclusion Education Modules provide evidence-based strategies for fostering inclusivity and reducing harmful bias in clinical practice. Programs like the University of Michigan's Cultural Competence Training and Coursera's Implicit Bias in Healthcare course offer specialized, accessible online learning to improve communication and address social determinants of health. These and other external resources offer structured opportunities to build DEI expertise, making them particularly attractive for residency programs seeking to integrate comprehensive, self-paced training that is supplemented by case-based discussion, complements existing curricula, and enhances patient care for diverse populations.

Institutional endorsement is helpful for successfully embedding DEI educational content into residency programs, with department leaders advocating for DEI as a core competency for discussing health care disparities, and for enhancing physician-patient communication across diverse populations.[35,36] Fostering an inclusive culture through resident-led initiatives, peer-mentoring, and regular feedback mechanisms ensures that DEI education is continuously evolving and resonates with residents. To ensure consistent application of DEI values, residency programs can pair residents with mentors for guidance on navigating patient interactions and fostering inclusivity. Regular feedback sessions and program-wide communications from leadership reinforce DEI priorities, holding both faculty and residents accountable for promoting inclusive, evidence-based practices in education and patient care.

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In conclusion, addressing health care disparities is crucial for providing equitable anesthetic care and implementing DEI curricula that aligns with ACGME Common Program Requirements. GME-based DEI training can vary, as evidence-based strategies and best practices for creating effective curricula remain underreported in anesthesiology. The research agenda on DEI education should focus on measuring outcomes such as improvements in cultural competence, patient satisfaction, and health care equity, while also evaluating the impact of DEI training on resident professional performance and clinical decision-making. Iterative improvements can be guided by continuous feedback, data collection, and the refinement of curricula based on evidence of effectiveness in addressing health disparities and promoting inclusive care. As DEI-focused initiatives become increasingly polarizing, our clinical objective to deliver equitable medical care to all patients must remain resolute. DEI education in GME can help physicians in training be better prepared to address health disparities, work with diverse patient populations, and improve patient outcomes. It is crucial at this juncture to address barriers to implementation and establish effective methods for evaluating the outcomes of these educational initiatives.

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Abstract

Background: Despite national recognition of diversity, equity, and inclusion (DEI) training in graduate medical education, the current landscape of DEI curricula across anesthesiology residencies is poorly understood. We surveyed anesthesiology residency programs to evaluate how DEI education is implemented and assessed.

Methods: We conducted a cross-sectional survey of all 164 Accreditation Council for Graduate Medical Education–accredited anesthesiology residency programs. The survey was developed, and data were collected using the Research Electronic Data Capture (REDCap) tool. Program characteristics and departmental attitudes toward DEI were collected on a 5-point Likert scale. Univariate and bivariate analysis models were used to generate a descriptive report of responses. Content analysis was used to identify additional themes from open-ended responses.

Results: Fifty-three (32%) program directors responded to the survey. As their primary practice setting, 71.7% of programs were university-based, 18.9% community-based university- associated, and 9.4% community-based programs. A DEI curriculum was reported in 64.2% of programs with the median year of implementation in 2020 and the median hours spent per academic year on DEI content was 2.0 to 3.5 (range, 1–20). Of programs without a DEI curriculum, 68.4% indicated interest in implementing one. Of those with a DEI curriculum, common learning activities were case-based discussion, web-based learning, classroom learning, and simulations. The most common barriers to implementation included educational expertise, time for residents, and time for faculty. Only 11.5% (n = 3) of programs assessed outcomes from their curricula, most using pre-post surveys.

Conclusions: This study found that the presence of a DEI curriculum in anesthesiology residencies is relatively new, heterogeneous, and nonstandardized, and that outcomes are rarely measured.

Keywords: Anesthesiology, residency, diversity and inclusion, curriculum

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Tables

Table 1. *Characteristics of Anesthesiology Residency Programs*

	n (%)
Location (n = 53)	
Urban	36 (67.9)
Suburban	16 (30.2)
Rural	1 (1.9)
Academic affiliation (n = 53)	
University-based	38 (71.7)
Community-based	5 (9.4)
Community-based and university-associated	10 (18.9)
Presence of DEI curriculum (n = 53)	
Yes	34 (64.2)
No	19 (35.8)
Interest in implementing DEI curriculum (n = 19)	
Yes	13 (68.4)
No	6 (31.6)
"DEI is important for our residency program" (n = 53)	
Strongly disagree	8 (15.1)
Disagree	0 (0)
Neutral	2 (3.8)
Agree	19 (35.8)
Strongly agree	24 (45.3)
Are there barriers to curriculum implementation? (n = 43)	
Yes	20 (46.5)
No	23 (53.5)
Barriers to implementation (n = 19)	
Educational expertise	14 (73.7)
Time for residents	13 (68.4)
Time for faculty	12 (63.2)
Financial support	7 (36.8)
Faculty buy-in	5 (26.3)
Leadership buy-in	5 (26.3)
Resident buy-in	4 (21.2)
Space to host	2 (10.5)
Other	2 (10.5)

Abbreviation: DEI, diversity, equity, and inclusion.

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Table 2. *Characteristics of DEI Curricula*

	Mean	Median	Range
Year of implementation (n = 26)	2019	2020	2010–2022
Hours spent on DEI training			
PGY-1 (n = 20)	4.68	2.0	1–20
PGY-2 (n = 26)	4.02	2.0	1–20
PGY-3 (n = 26)	3.90	2.5	1–20
PGY-4 (n = 26)	5.04	3.5	1–20
DEI training formats (n = 20)	**n (%)**		
Case-based discussion	13 (65)		
Web-based learning	10 (50)		
Classroom learning	7 (35)		
Simulations	7 (35)		
Interactive workshops	6 (30)		
Other	4 (20)		
DEI curriculum topics (n = 26)			
Bias	25 (96.2)		
Health disparities	24 (92.3)		
Social determinants of health	22 (84.6)		
Structural determinants of health	19 (73.1)		
Systemic racism	18 (69.2)		
Cultural humility	12 (46.2)		
Health literacy	12 (46.2)		
Bystander/Upstander training	9 (34.6)		
Intersectionality	4 (15.4)		

Abbreviations: DEI, diversity, equity, and inclusion; PGY, postgraduate year.

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Table 3. *Qualitative Analysis of Themes from Open-Ended Text Box Questions Within the Survey*

DEI Curricula Themes	Example Participant Quotes
Current political climate	"Nascent programs have had to proceed very cautiously in the setting of the de-legalization of affirmative action, and the widening national opinion gap, including the decline of civility and increase in acceptability of 'attacking the other.' Navigating policy-based restrictions on care has been complex, even in blue states, especially when trainees rotate at multiple affiliate sites." (Participant A)
	"We are very supportive of diversity, but DEI has become a Trojan horse for far-left political indoctrination. We are fully committed to providing equal opportunity to all candidates regardless of race. We evaluate candidates as unique individuals rather than as members of groups. We do not racially profile." (Participant B)
Faculty/resident buy-in	"While being tolerant and respectful of others' beliefs, sexuality, etc., and understanding that bigotry/bias exists in medicine, very little can be accomplished from a 1-hour lecture or even multiple lectures. Additionally, the ABA curriculum is already extensive in what they believe should be accomplished within a 4-year residency. Teaching others to remove bias and discrimination from patient interactions is important, and being able to provide safe and effective anesthesia care is probably of greater importance to physicians. Also, some bias/discrimination is so well engrained you will not be able to teach it out of people." (Participant C)
	"Residents do not see the value of adding DEI curriculum in an already busy schedule and focus on studying for boards and clinical training. More work needs to be done to provide a foundation to create resident buy-in to have successful implementation." (Participant D)

Abbreviations: ABA, American Board of Anesthesiology; DEI, diversity, equity, and inclusion.

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Supplemental Online Material

Appendix 1. DEI Anesthesiology Survey

1. Is your program urban, suburban, or rural?
2. Is your program community-based, community-based university-associated, or university-associated?
3. How important is DEI to the department?
    - Not at all important
    - Not very important
    - Neutral
    - Somewhat important
    - Very important
4. Does your department have DEI curriculum?
    - Yes
    - No
        - i. If no > Is your program interested in implementing one?
            1. If no > survey ends
            2. If yes > barriers to implementing DEI curriculum (select all)
                - Time for faculty
                - Time for residents
                - Financial support
                - Educational expertise
                - Space to host activities
                - Faculty buy-in
                - Resident buy-in
                - Leadership buy-in
                - Other:
                    - i. > survey ends
        - ii. If yes > survey continues
5. When was the curriculum implemented? (year)
6. During which year(s) of residency training do your residents participate in IPE (Please check any responses that apply and indicate the number of hours)
    - PGY1: yes, no, does not apply (advanced program)
        - i. If yes > About how many total hours?
    - PGY2: yes, no
        - i. If yes > About how many total hours?
    - PGY3: yes, no
        - i. If yes > About how many total hours?
    - PGY4: yes, no
        - i. If yes > About how many total hours?
7. Does your program provide trainings in any format other than lecture? (ex. interactive workshops, simulations, case discussions, etc)
    - Yes
    - No

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Supplemental Online Material *continued*

8. Types of DEI training formats (Please select all that apply)
    - Classroom learning
    - Web-based learning
    - Simulations
    - Interactive workshops
    - Case discussions
    - Team-based discussions
    - Other: please elaborate
9. Topics addressed by DEI curriculum adapted from AAMC competencies (select all that apply):
    - Bias
    - Intersectionality
    - Structural determinants of health
    - Systemic racism
    - Health disparities
    - Social determinants of health
    - Cultural humility
    - Health literacy
    - Bystander/upstander training
    - Other: please elaborate
10. Do you assess outcomes in your curriculum?
    - Yes
    - No
        i. If no > skip
        ii. If yes > What outcomes are assessed?
            - Satisfaction with learning experience
            - Content-specific knowledge
            - Content specific skills (ex- communication)
            - Attitudes toward specific content
            - Other: please elaborate
11. What methods are used to assess outcomes in your curriculum? Please describe (ex. post satisfaction survey, pre-post knowledge test, IAT, essay, etc.) (text box)
12. Anything else to add? (text box)