Diversity, Equity, Inclusion, and Justice

An Anti-Racism and Equity Initiative Improves Residency Educational Conferences

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ABSTRACT

Background Graduate medical education curricula may reinforce systemic inequities and bias, thus contributing to health disparities. Curricular interventions and evaluation measures are needed to increase trainee awareness of bias and known inequities in health care.

Objective This study sought to improve the content of core noontime internal medicine residency educational conferences by implementing the Department of Medicine Anti-Racism and Equity (DARE) educational initiative.

Methods DARE best practices were developed from available anti-racism and equity educational materials. Volunteer trainees and faculty in the department of medicine of a large urban academic medical center were recruited and underwent an hourlong training to utilize DARE best practices to coach faculty on improving the anti-racist and equity content of educational conferences. DARE coaches then met with faculty to review the planned 2021-2022 academic year (AY) lectures and facilitate alignment with DARE best practices. A rubric was created from DARE practices and utilized to compare pre-intervention (AY21) and post-intervention (AY22) conferences.

Results Using the DARE best practices while coaching increased the anti-racism and equity content from AY21 to AY22 (total rubric score mean [SD] 0.16 [1.19] to 1.38 [1.39]; P=.001; possible scores -4 to +5), with 75% (21 of 28) of AY22 conferences showing improvement. This included increased diversity of photographs, discussion of the racial or ethnic makeup of research study participants, appropriate use of race in case vignettes, and discussion of the impact of racism or bias on health disparities.

Conclusions Training coaches to implement DARE best practices improved the anti-racism and equity content of existing noontime internal medicine residency educational conferences.

Introduction

In 2002, the National Academy of Medicine identified clinician-held bias and systemic inequities as contributors to racial and ethnic health disparities.[1-3] While graduate medical education (GME) curricula have expanded to include health equity conferences, the current GME curricular structure reinforces stereotypes and furthers disparities by limiting exposure to racially/ethnically diverse patient populations.[4-6]

Curricula propagate bias through different mechanisms. When GME curricula exclude historically marginalized groups in case vignettes or in images (eg, a White patient with cystic fibrosis; rashes on less pigmented skin), bias is introduced, which can delay diagnoses for future patients. Using stereotypes (eg, a homosexual man diagnosed with HIV or a Latinx patient with Chagas disease–related heart failure) can pathologize certain identities and contribute to diagnostic bias.[3,5-10] Conflating race with genetic ancestry, rather than defining it as a social construct, leads to disease risk factors (eg, environmental exposures or stress response to racism) being overlooked.[11,12] Utilizing race in clinical calculators reinforces the false concept of race as a biological marker (eg, inclusion of race in the calculation of glomerular filtration rate has created significant health disparities in the treatment of renal disease in Black patients).[3,13,14] Race-based medicine furthers health disparities by making it more challenging to diagnose disease and/or initiate treatment in those most at risk for disease-associated morbidity and mortality.[3,5-7,14-16] Finally, opportunities to highlight racism/inequities are frequently missed in lectures that are not focused on equity or the social determinants of health.

While stand-alone health equity curricula exist, little is known about integrating anti-racism and equity (ARE) into existing curricula.[17,18] We hypothesized that coaching lecturers to use 5 key aspects of an ARE framework would improve preexisting curricula.

DOI: http://dx.doi.org/10.4300/JGME-D-22-00443.1

Methods

In May 2021, the Department of Medicine Anti-Racism and Equity (DARE) educational initiative was launched at a large urban academic medical center. DARE coaches (6 trainees and 20 faculty) were recruited and trained to utilize DARE best practices for improving ARE during noontime internal medicine residency educational conferences; 45-minute conferences occur on weekdays during the academic year (AY) and are recorded to increase access. DARE is part of a wider departmental ARE strategy that includes clinical care, research, community engagement, leadership development, culture change, and other educational initiatives.[19] Each volunteer DARE coach (trainees and faculty) underwent a 1-hour training that included watching training videos (30 minutes) and facilitated slide editing using the DARE framework (30 minutes).

DARE best practices were developed based on available ARE educational materials.[20,21] Best practices for giving presentations include deliberate inclusion of diverse images (photographs and graphics), discussion of disease inequities or the impact of systemic bias and/or racism on health outcomes, and discussion of research study populations' race/ethnicity to understand generalizability. DARE best practices also highlight several practices to avoid, for example, conflating race with ancestry in identifying clinical risk factors, using stigmatizing terminology (eg, addict versus patient with a substance use disorder), and using images or cases that reinforce historical stereotypes or exclude historically underrepresented groups.[22-26] The best practices were piloted and revised based on study team feedback.

Six weeks prior to each AY 2021-2022 (AY22) conference and based on coaches' availability, DARE coaches were paired with faculty who had given that same presentation during AY 2020-2021 (AY21). Each dyad met at least once to discuss possible changes to the AY22 lecture. DARE coaches and lecturers met for 30 to 60 minutes or communicated via email. DARE coaches reviewed DARE best practices with lecturers, provided some curated specialty-specific references, reviewed the planned lecture slides (when available), and provided feedback on possible slide improvements from an ARE perspective. Faculty then updated their slides and gave the AY22 lectures on their own.

A rubric was created from the DARE best practices to evaluate the effects of DARE coaching on lectures. The rubric assessed the use of diverse images, the discussion of research participants' race/ethnicity, the use of race in case vignettes, and the discussion of the impact of race/racism on health inequities; if photographs, graphics, cases, or research studies were not included, that component was scored as not applicable (TABLE). The rubric was piloted and revised based on study team feedback. The change in total rubric score (mean [SD]) from AY21 to AY22 was the primary outcome. Based on power calculations, 28 lecture pairs were needed to detect a 20% difference in score (assumed SD=0.3, beta=0.8) with the DARE coaching intervention. The rubric was applied to the first 30 residency educational conferences in AY22 that had the same presenters and topics as AY21.

Eight reviewers (the study team) used the rubric to analyze and score the lecture recordings. Specifically, 2 reviewers independently viewed and scored each residency educational conference video recording. The mean score between the 2 reviewers was analyzed. Recordings were randomly assigned, and reviewers were unblinded to AY; however, no reviewer evaluated both the AY21 and AY22 versions of a given conference. Furthermore, individual reviewers were blinded to the scoring of the other reviewers. Paired *t* tests with $P<.05$ were considered statistically significant, without correction for multiple comparisons. The weighted rubric score was used to normalize the total rubric score to between -1 and +1 (total score/number of rubric components scored) to account for different numbers of rubric components between conferences. There was strong inter-rater reliability between the reviewer pairs' total rubric score (interclass correlation coefficient [95% CI] 0.79 [0.67-0.87]). Statistical analysis was conducted using R version 4.0.4 (R Foundation for Statistical Computing).

The protocol was considered exempt by the Mass General Brigham Institutional Review Board.

Results

Approximately 200 residency educational conferences occurred in each AY; fewer than 50 shared the same topic and lecturer each year. Fifty-six conferences (28 pre-/post-training pairs) were evaluated, and 2 conference pairs were not recorded. DARE coaching increased both the total rubric score (0.16 [1.19] to 1.38 [1.39], $P=.001$) and the weighted rubric score (0.05 [0.32] to 0.35 [0.35], $P=.002$) from AY21 to AY22 (FIGURE). DARE coaching improved the diversity of photographs (-0.19 [0.86] to 0.50 [0.72], $P=.006$), the discussion of research participants' race/ethnicity (0.06 [0.22] to 0.33 [0.41], $P=.004$), the appropriate use of race in case vignettes (-0.09 [0.25] to 0.07 [0.23], $P=.034$), and the discussion of the impact of racism/bias on health disparities (0.12 [0.42] to 0.50 [0.53], $P=.005$). Most AY22 conferences (75%, 21 of 28) demonstrated

TABLE
Department of Medicine Anti-Racism and Equity Educational Initiative Evaluation Rubric

Components	Scoring			
	-1	0	1	Not Applicable
A. Evaluation of photographs	Images used mostly represent only historically included groups	Images used do not include a particular group	Images used mostly reflect diversity of presentations and individuals	No photographs were included
B. Evaluation of graphics	Graphics include historically excluded groups in a stereotypical way and/or fail to address the impact of bias	Graphics used do not contain information about historically excluded groups	Graphics used address the impact of bias or systemic inequities on historically excluded groups	No graphics were included
C. Evaluation of research studies		Race/ethnicity of research participants not described or discussed	Race/ethnicity of research participants described and discussed	No research studies were included
D. Evaluation of clinical cases	Clinical cases reinforce historical racial/ethnic stereotypes	Race/ethnicity of patients in clinical cases not mentioned	Clinical cases move beyond historical stereotypes	No clinical cases were included
E. Evaluation of the impact of race/ethnicity on disease prevalence, management, or outcomes	Inequities not addressed or inequities explained in ways that reinforce stereotypes or falsehoods	Impact of race on prevalence, management or outcomes not discussed	Impact of bias, systemic racism or other forms of structural inequity on heath inequities discussed	

Note: Total rubric score=score for A+B+C+D+E (if a component was scored as not applicable, the component was not included in the total rubric score). Weighted rubric score=overall rubric score/number of components evaluated.

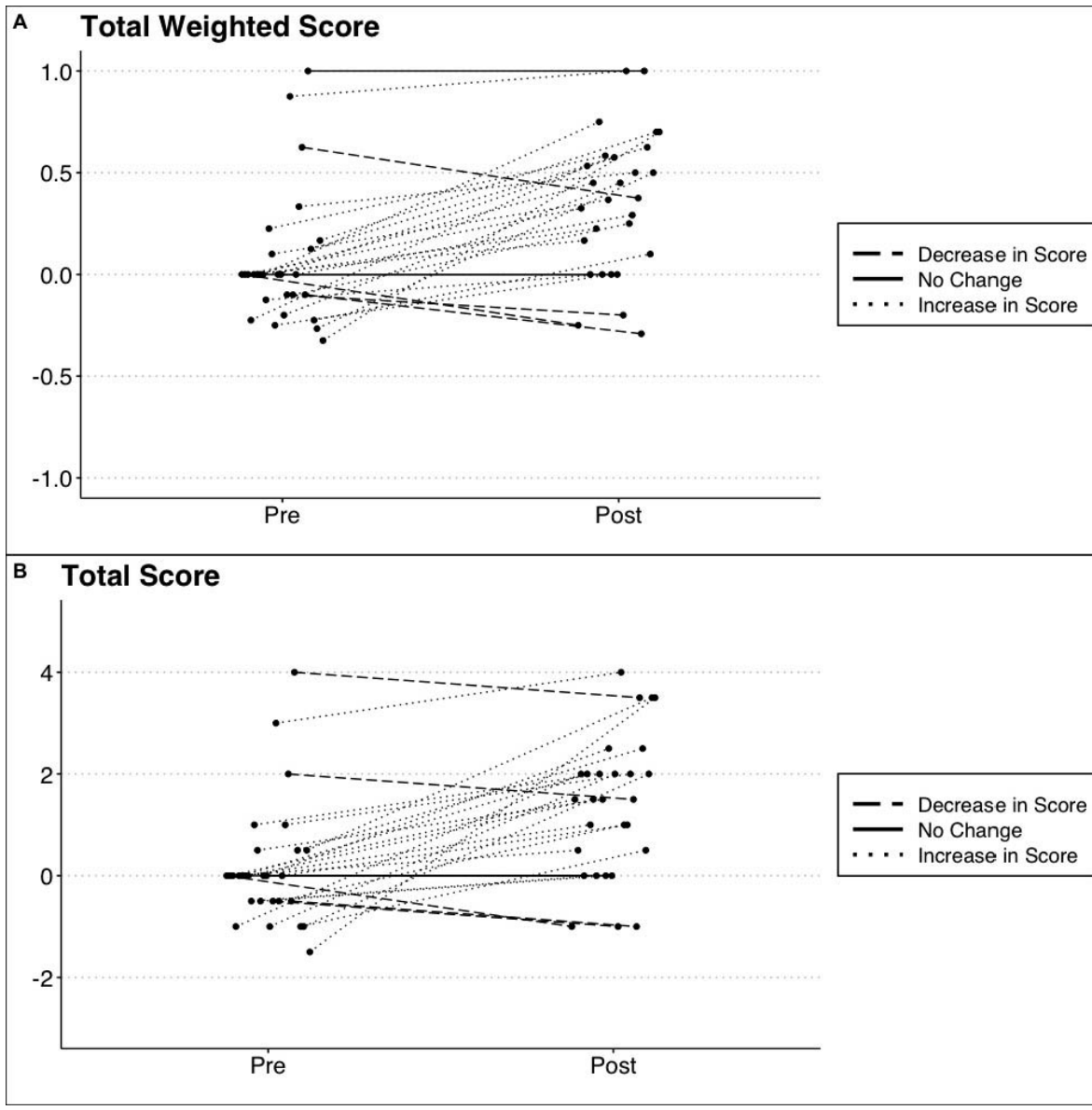
improvement in the weighted rubric score (11% [3 of 28] had no change in score and 14% [4 of 28] had a lower score). DARE coaching did not impact the diversity of graphics (0.12 [0.36] to 0.22 [0.35], P=.28).

Discussion

Through engaging internal medicine trainee and faculty coaches trained in the DARE best practices (ie, deliberate inclusion of diverse images, discussion of disease inequities or the impact of systemic bias or racism on health outcomes, increasing the appropriate use of race in case vignettes, and discussion of research study populations' gender and race/ethnicity), we improved the integration of ARE content into existing conferences. This intervention occurred within the context of a departmental-wide ARE focus. Conferences with coaching were more likely to include diverse images and discuss the effects of racism or bias on health.

Prior GME initiatives have included anti-racism workshops or lecture series to reduce bias or stereotyping in curricula; however, none has assessed the intervention's effect on educational conferences or used a coaching model.[27-29] Notably, DARE best practices were applied to existing internal medicine lectures, ranging from cardiology to endocrinology; generally, faculty were receptive to being coached. The diversity of photographs, the discussion of research study demographics, the appropriate use of race in case vignettes, and the discussion of the impact of racism/bias on health outcomes improved markedly. These improvements may be due to both increased anti-racism awareness and resource availability (eg, provided references and access to diverse photographs online). The rubric was clear and easy to use when reviewing the pre- and post-intervention recordings; the strong interrater reliability suggests that the rubric is effective, even with its limited range.

The intervention, however, did not improve the diversity of graphics utilized, which could reflect lack of publicly available diverse graphics. Four of the 28 AY22 conferences had lower scores, secondary to the inclusion of new, less diverse photography and less discussion of the impact of race/racism on health inequities. The lower overall scores in a minority of



FIGURE

Improvement in Rubric Score From AY21 to AY22

Abbreviation: AY, academic year.

Note: Total and total weighted rubric scores are shown from AY21 (pre-intervention) and AY22 (post-intervention) for conferences that underwent the Department of Medicine Anti-Racism and Equity educational initiative. Overall, 75% (21 of 28) of conferences improved the anti-racism and equity content. Total score was assessed across 5 anti-racism and equity domains (range -4 to +5). The weighted rubric score was utilized to normalize the total rubric score to between -1 and +1 (total score/number of rubric components scored) to account for different numbers of rubric components between conferences.

lectures (14%) shows that application of the DARE best practices can still be further improved.

Limitations include the single-site and single-residency (internal medicine) setting, and the fact that a subset of residency educational conferences was evaluated. Reviewers could not be blinded to AY given presenters' current events references and reviewers' recognition of residents in attendance. The department was supportive of the intervention, as reflected in DARE coaches' voluntary participation, which could have contributed to the intervention's success.

In the future, we will assess the sustainability of coaching to determine if previously coached faculty continue to apply the DARE framework without additional coaching. We will study implementing the intervention in different educational settings (eg, other residency programs or institutions). Finally,

we hope to assess the impact of integrated ARE curricula on resident behaviors (eg, decreased utilization of race in clinical decision-making).

Conclusions

Application of DARE best practices improves the anti-racist and equity content of noontime internal medicine residency educational conferences and can be used to promote health equity within GME.

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Funding: Funding for this study was provided by the Massachusetts General Hospital Executive Committee on Teaching and Education (ECOTE) and the National Heart, Blood, and Lung Institute, National Institutes of Health (NHBLI grant number: R38 HL150212-01).

*Drs James and Matthiesen served as co–first authors and contributed equally to the work.

Conflict of interest: The authors declare they have no competing interests.

The authors would like to thank the Department of Medicine Anti-Racism and Equity Educational Initiative coaches and the Massachusetts General Hospital ECOTE that supported this study.

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Received June 5, 2022; revisions received January 7, 2023, and January 9, 2023; accepted March 7, 2023.