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Response to Commentaries

Response to Society for Epidemiologic Research Diversity and Inclusion Survey Commentaries

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Editor's note: *The opinions expressed in this article are those of the authors and do not necessarily reflect the views of the American Journal of Epidemiology.*

We thank all the authors for answering our call for commentaries (1–10) to our article assessing diversity and inclusion among members of the Society for Epidemiologic Research (SER) (11). These insightful commentaries represent voices that should be heard with respect to diversity and inclusion in SER. They raised many sobering and important points and contain a wealth of actions for improving diversity and inclusion within the Society. The SER Diversity and Inclusion Committee and SER leadership will deliberate these ideas to identify effective and sustained diversity and inclusion actions for our organization. Here, we have endeavored to respond to all points covered by the commentaries herein, acknowledging that publication space constrains the more extensive exchange that these points warrant. The exchange represented by the pieces in the *Journal* should be viewed as only a small part of meaningful dialogues on improving diversity and inclusion in SER and we are grateful to all the authors for generously sharing their time, experiences, and expertise.

In their article, Allen and Lewis (1) assert that the use of political affiliation is not an appropriate metric for diversity because it undermines the promotion of diversity and inclusion in epidemiology by working against equity-building initiatives. The authors point out that the promotion of political diversity is based on the premise that increasing diversity means increasing the variety of identities, which is agnostic to the power and priority those identities have historically received. We see the authors' point and believe it warrants

careful consideration in the context of the overarching and diversity and inclusion goals of SER. These goals should determine the appropriateness of political affiliation as a diversity metric. Drs. Lilienfeld, Terris, and MacMahon established SER as an organization for scientific research to “exchange ideas” (12), presumably for the purposes of advancing the field. If SER should represent a microcosm of society consisting of a wide variety of identities, SER's goal may be to diversify identities and ideas, as epidemiology and science in general grow on a wide variety of views and perspectives (13–18), acknowledging antiscience views are an obvious and notable exception. Conversely, if the promotion of this kind of diversity is agnostic to inclusion, the variety of researchers could increase, but not the full or quality engagement among all people if persons do not feel included, welcomed, or valued (19). When these persons are reluctant to share their ideas (or are not given full consideration), we threaten our organization's goal of continuously circulating diverse perspectives and ideas over the long term. Furthermore, the field's impact on public health could suffer. Indeed, in the SER data, members of various groups were less likely to report feeling very welcomed (11); women with racial/ethnic nonresponse were least likely, whereas White men were most likely to report feeling very welcomed. Clearly, we should not solely focus on diversity to the detriment of inclusion, or vice versa. Rather, both should be thoughtfully promoted to cultivate the richest pool of ideas possible. The work of Allen and Lewis (1) highlights the need for being intentional in balancing diversity and inclusion within SER. We further appreciate the authors' suggestion of the use of the Public Health Critical Race Praxis model in epidemiologic research by placing racism and intersecting inequities in their broader structural context given it is the background for all public health work.

The article by Jackson (2) provides a well-researched compendium of actions for advancing diversity and inclusion in SER. This thought-provoking work challenges SER leadership and committees to examine critically how to evaluate ideas for future diversity and inclusion opportunities, offering the importance of measuring potential impact over intent and that future work “should be centered around inequity stemming from the widespread historical and contemporary maldistribution of power (e.g., decision making) and resources (e.g., funding).” In acknowledgment of these observations, the SER Diversity and Inclusion Committee will propagate discussion and action on this topic in terms of promoting justice, dissent, and the best science, all of which are codependent (20). We strongly urge SER leadership and other SER committees to do the same.

In their commentary, Becerra et al. (3) discuss how SER’s Diversity and Inclusion Committee could consider measured variables related to career outcomes and trajectories. We encourage data-driven evaluations of interventions to diminish disparities. The Diversity and Inclusion Committee will consider assessing aspects of career development and workforce outcomes in future iterations of the survey such that these may be examined longitudinally, as Becerra et al. (3) suggest.

Bovbjerg et al. (4) argue that inclusion of institution at the annual meeting should be a metric for diversity. This is a notable point. We agree that diversity by institutional affiliation should be acknowledged and tracked, as it underpins inclusion on multiple dimensions such as race, resources, and geographic representation. In their analysis of data from the 2019 annual SER meeting, just 8 institutions composed between 33% and 64% of oral presentations and symposia. We urge SER leadership to take note of these findings and deliberately include diverse perspectives by including scholars from a broad array of institutions at both the annual meeting and in online programming. SER efforts to improve diversity and representation by institutional affiliation include, for example, the creation of the *SERvisits* program (7) to establish meaningful, bidirectional engagement with institutions that have been historically marginalized and under-represented at SER. In addition, similar to Bovbjerg et al. (4), results of a bibliometric analysis of SER annual meeting presentations by institutional affiliation are forthcoming (21). We welcome additional ideas to track SER’s progress on diversity by institutional affiliation.

In their commentary, Johnson and Chin (5) suggest diversifying locations of SER annual meetings as a means to reduce financial barriers to conference attendance to increase diversity among conference attendees. This is a good point, and we agree that SER annual meetings should occasionally be held in less expensive cities or in cities with a high concentration of public health programs. It will also be important to recognize that locations where large concentrations of public health programs do not already exist may foster more diversity and inclusion and offer important opportunities for new mutual exchange at the annual meeting. In addition to diversity, inclusion, and participant cost, many other factors must also be weighed in selecting conference locations, such as airline accessibility, interest of local professionals, local hotel capacities,

expected attendance, and contract costs. We acknowledge that diversity and participant cost are important factors for consideration, and we thank the authors for their recommendations.

Đoàn et al. (6) make recommendations for SER to strengthen its commitment to diversity, inclusion, and equity by integrating this priority on all agendas, supporting the growth of a diversifying workforce in epidemiology, increasing the visibility of health disparities research and researchers in epidemiology, and enhancing efforts to improve accountability within the organization. The Diversity and Inclusion Committee commits to working toward these objectives. For example, publication of survey findings (11), the upcoming bibliometric analysis of presenters at SER (21), and our response to commentaries are methods of holding us accountable. The authors additionally recommend enhancing efforts to improve self-awareness among members; SER leadership and the Diversity and Inclusion Committee will consider this in future goal-setting initiatives. With regard to our original manuscript (11), we appreciate the authors’ comments about potential bias due to multiple imputation (MI) if underlying assumptions are inaccurate (13). Whereas the proportion of imputed missing data in our study ranged from 1% to 51%, the potential bias imparted by MI is not a function of the proportion of missing data for any given variable, but rather the missingness mechanism by which it came to be unobserved. Estimates produced by MI are unbiased when the data are missing completely at random or missing at random. Missing completely at random requires that missingness be independent of all measured or unmeasured variables, whereas missing at random requires that missingness be related only to measured variables. However, if missingness is additionally related to unmeasured variables, then the data would be missing not at random, and multiple imputation could impart bias (22–25). Although we used a wide variety of demographic characteristics (Table 2) (11) in our MI under a missing at random assumption to mitigate bias, missingness due to unmeasured variables (i.e., missing not at random) remains a possibility. We hope to improve the survey response rate in future iterations and thank the authors for suggesting we explore reasons for survey nonresponse.

In their article, Zhang et al. (8) recommend goals for SER and detail numerous suggestions for diversity and inclusion promotion within the organization. They recommended actions such as convening epidemiologic researchers with diverse backgrounds and ideas, promoting an inclusive environment at the SER annual meeting, developing and disseminating best practices to honor diversity in epidemiologic research, and increasing prioritization of health disparities research and methods. We acknowledge the Johns Hopkins Bloomberg School of Public Health Department of Epidemiology’s Inclusion, Diversity, Equity, and Science working group’s expertise, experience, and insight. We appreciate their suggestions on how to make the annual meeting more inclusive and agree that health disparities research—its substance and its methods—addresses a fundamental cause of illness and should play a central role in the meeting. We recommend that future organizing committees read and adopt action discussed by Zhang et al. (8).

Moore et al. (9) suggest that SER appears strong with respect to diversity but lags with respect to inclusion. They make noteworthy recommendations for future survey iterations and analyses with respect to measuring inclusion, adding barriers to participation, data analysis, and evaluating diversity and inclusion efforts. These are excellent points. Although the measures of inclusion in our article were not ideal, these data (11) show that some SER members do not feel welcomed. We acknowledge that there is much room for improvement both in SER and on future iterations of the survey and respective analyses and appreciate these recommendations. Moore et al. (9) also articulate the possibility that our recruitment methods may have produced differential response from members of underrepresented identities. Given that the cover letter inviting members to participate in the survey cited “diversity,” “inclusion,” and “non-discrimination,” we indicate in the article (11) that survey respondents could have differed from nonrespondents. This is supported by differences in response rates by race and ethnicity and gender (see Table 1 of DeVilbiss et al. (11)). For example, we see that Black members were more likely to respond than White members. Although we used inverse probability weighting to generalize our findings to all of SER’s membership, in the future we can improve the phrasing of the cover letter and survey questions, ideally freeing us from the need for analytical methods to account for this issue of unbalanced sampling (26). For the SER survey data, weights were constructed on the basis of race and ethnicity, gender, and institutional representation, to address potential differential response by these characteristics. Weighting resulted in each survey respondent analytically accounting for more than 1 SER member (range, 1.8–63), with the weights summing to the total number of SER members in 2018 ($n = 1,631$). However, we note in our article (11) that if response is additionally related to other factors, the potential for residual bias remains because these factors could not be addressed by weighting. Residual bias could also arise if responses by race and ethnicity, gender, and institutional representation were not representative of nonresponses in each of these groups.

In their article, Puac-Polanco and Morabia (10) suggest a wide variety of constructive ideas for SER diversity and inclusion programming including but not limited to a panel to review and determine community response to survey findings, running periodic member surveys and improving their response rates, collecting perhaps more open-ended information on reasons for not feeling welcomed, operationalizing inclusion more meaningfully and completely, supporting and appropriately recognizing the involvement of members of under-represented groups, applying inclusion practices at every level of SER, and instituting inclusive policies and procedures. We strongly recommend that the SER Diversity and Inclusion Committee take leadership on incorporating these recommendations to help move the field forward.

CONCLUSION

We again thank and appreciate all the authors for the rich content of their commentaries. As a result, SER has

amassed an incredible resource of recommendations for improving diversity, inclusion, and equity in SER and for comprehensively tracking our progress over time. This is our responsibility, which we are committed to addressing, given the extensive history of racism and injustice, including in our own field, especially toward people of color. We acknowledge racism as a detriment to public health, and we condemn it in all of its overt and insidious forms. As an organization, we will work to be part of the solution first by listening, learning, working to improve the culture of inclusion, committing to support and recognize the involvement of epidemiologists of color, and elevating the conduct of epidemiologic research with shared purpose and action. We additionally commit to offering space to continue meaningful dialogue to the extent that it is desired through the continued offering of workshops, sessions, and professional development seminars aimed at promoting diversity. To identify effective and sustained diversity and inclusion opportunities for SER, the Diversity and Inclusion Committee and SER leadership commit to thoughtful consideration of the actions recommended in each of these commentaries. Finally, we undertook this survey with the goal of repeating it over time to identify changes in diversity and inclusion within and among our society members. We hope the Diversity and Inclusion Committee, with the influx of new members, will continue administering the survey and acting on its results, because we believe in data-driven and evidence-based approaches to monitoring, examining, and addressing inequities.

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