

Examining the Sources of Gender and Race/Ethnicity Disparities in Radiology

- Even after years of efforts to address the issue, radiology has greater gender and race/ethnicity gaps in physician representation than other areas of medicine.
- Studies of the problem have centered on disparities in markers of professional success including attainment of leadership roles and salary.
- In a recently published study, researchers sought to understand ongoing barriers to increasing diversity in radiology.
- Efforts at Mass General seek to address biases related to gender and race/ethnicity to help overcome some of the challenges in attaining a diverse workforce in radiology.

Despite strong, consistent efforts in recent years to improve recruitment of women and underrepresented minorities (URMs), radiology still has more pronounced gender and race/ethnicity gaps in physician representation than other areas of medicine. While roughly half of all medical school graduates are female and one in ten are URMs, women account for only one in four physicians, and URMs account for only one in fifteen physicians in radiology. This continuing discrepancy suggests that additional, as-yet-unexplored factors contribute to the gaps.

To date, most of the literature on this subject has focused on disparities in markers of professional success, such as attainment of leadership roles, and primarily on gender disparities; few studies have looked at disparities among URMs in radiology. Recently, seeking to achieve a fuller understanding of the barriers to diversity in the field, a team of researchers at Massachusetts General Hospital and colleagues at other institutions conducted a survey of physician members of the American College of Radiology (ACR) asking specifically about their perceptions and experiences of unfair and disrespectful treatment in the workplace based on their gender or race/ethnicity. The resulting study, reported last month in the *Journal of the American College of Radiology*, adds insights into gender and race/ethnicity gaps in radiology with the potential to help address the ongoing imbalances in the field.

Survey of ACR Membership Exposes Barriers to Increasing Diversity in Radiology

The survey was unique in two important ways. First, it included a large, broad sampling of the ACR's physician membership, most of whom are radiologists. The Mass General team and its collaborators received 461 responses (from 900 survey invitations sent, a response rate of more than 50%) from physicians across the country, representing a cross-section of the radiology community rarely captured in similar studies. Also, it asked questions specific to the workplace that, to the researchers' knowledge, have not commonly been included in surveys of radiologists in the past. For example, one item in the survey, developed originally for an MGH Diversity Culture Survey, asked, "*In the past year...have you personally felt you were treated unfairly or with disrespect because of... "..."your gender," "...your age," or "...your race and/or ethnicity?"*" Posing such questions was important to the researchers because identifying barriers to increasing diversity in radiology – or in any field – depends strongly on understanding physicians' perceptions and experiences of their work environments and professional relationships and how they differ among women and URMs. Ultimately, getting to the root of these differences is key to removing the barriers.

So how do the perceptions and experiences differ? The study found that one in two women (50.6%) reported unfair or disrespectful treatment attributable to gender, as opposed to only one in 20 men (5.4%); these findings were statistically significant. Because of the small sizes of many subgroups, the researchers could not perform the same

kind of statistical tests in their analysis related to race/ethnicity, but when they asked a similar question, 28% of URM's said they had been treated unfairly or with disrespect because of their race or ethnicity, compared to only about 3% of white non-Hispanic respondents.



Top Photo: The Mass General Department of Radiology held its second annual Lucy F. Squire, MD, Lecture in September 2019. The lecture, entitled "Fearless Leadership," by Geraldine McGinty, MD, MBA, chair of the Board of Chancellors of the American College of Radiology, was part of a broader effort by the Women in Radiology group at the hospital to improve recruitment and retention of women in the field. Photo courtesy of Dania Daye, MD, PhD.

Bottom Photo: The Women in Radiology group at Mass General is open to all women faculty, residents and fellows in the Department of Radiology. Shown here is Women in Radiology Founding Co-chair Dania Daye, MD, PhD (center), with, from left to right, Kathy Andriole, PhD (Brigham and Women's Hospital and the MGH/BWH Center for Clinical Data Science), Sonia Gupta, MD (Beth Israel Hospital), Hillary Kelly, MD (Mass General), and Bharti Khurana, MD (Brigham and Women's). Photo courtesy of Carmen Alvarez.

Entrenched Attitudes and Behaviors Hinder Efforts to Create More Inclusive Environments in Radiology

These numbers may come as a surprise, especially as departments around the country have been working to increase diversity by creating more inclusive environments. Indeed, more than four in five survey respondents, across all gender and race/ethnicity subgroups, said that their department or practice “fosters a culture of respect for all people.” This seeming disconnect points to the possibility of additional factors driving the age and race/ethnicity gaps in radiology – factors that have, thus far, attenuated attempts to close the gaps – and underscore the unfair or disrespectful treatment that many women and URM in the field still experience.

These factors center on the question of culture, i.e., the cluster of attitudes and behaviors that define a group or organization. While radiology departments have made significant efforts to foster cultures of respect, deeply entrenched attitudes about gender and race/ethnicity persist, manifesting themselves in a variety of behaviors. In the recent survey, a striking percentage of physicians across a number of race/ethnicity groups – including white non-Hispanic, Asian or Asian American non-Hispanic and URM respondents – noted that their colleagues sometimes made offensive comments about race or ethnicity. Such comments only serve to undermine the cultures of respect otherwise engendered in the departments.

New Initiatives Take Aim at Underlying Causes of Gender and Race/Ethnicity Disparities in Radiology

The ACR survey has already made an impact in the field of radiology by increasing awareness of these entrenched attitudes and behaviors and starting the conversation about how best to address them. The ability to have an open dialog about such issues is critical to any attempt to tackle them. In any workplace, people don’t always pay adequate attention to what constitutes a healthy work environment for their colleagues. Open, honest exchanges of views about persistent attitudes and behaviors, and how these impact others in the workplace, can contribute to better understandings of each other’s needs.

Similarly, efforts to increase diversity can be advanced by heightening people’s awareness of their own implicit biases. As with entrenched attitudes and behaviors, the first step in addressing implicit bias is drawing attention to the fact that it exists. At Mass General, the Women in Radiology group, an organization dedicated to the advancement of women clinicians and researchers in the Department of Radiology, are planning an implicit bias workshop for physicians and staff, both to raise awareness of the issue broadly and to provide solutions to help address it.

Further efforts are under way at the national level. For example, this year’s meeting of the Radiological Society of North America (RSNA) will feature a session on diversity and inclusion, with topics including the importance of diversity generally, the necessity of building a strong diversity pipeline, and the retention and promotion of women and URM. Also at the meeting, the RSNA Resident and Fellow Committee (RFC) will launch a social media campaign built around the hashtag #WeAreRadiology, emphasizing the strength radiology gains from having a diversity of voices and viewpoints and the ways in which this diversity can advance care throughout the field.

Further Information

For more information about the ACR survey and its findings, please contact [Pari V. Pandharipande, MD, MPH](#), Department of Radiology, Massachusetts General Hospital. For more information about both Mass General and RSNA initiatives to advance diversity and inclusion, please contact [Dania Daye, MD, PhD](#), Department of Radiology, Massachusetts General Hospital, and chair of the RSNA RFC Diversity and Inclusion Committee. For more information about the MGH Diversity Culture Survey, please contact [Karen Donelan, ScD](#), Health Policy Research Center, the Mongan Institute, Massachusetts General Hospital. We would like to thank Drs. Pandharipande, Daye and Donelan for their advice and assistance in preparing this article.

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