Despite their increased enrollment into medical school, women still face systemic barriers in medicine, whether in an academic or nonacademic setting. Those from Under-Represented Minority (URM) groups face similar issues, which may affect their desire to enter, pursue, and/or maintain a career in medicine. Social media provides unique opportunities for peer-to-peer support among members of URM communities and for amplification of their voices calling for social justice—here defined as a redistribution of power and the quest for equity in access to opportunities, including access to mentorship, professional development, and timely promotion in academic rank. These issues are relevant to oncologists especially as we strive for diversity, equity, and inclusion and to ensure that our patients have equal access to care, regardless of circumstances. In this article, we review current literature that highlights issues faced by women and historically URM groups in medicine, particularly in oncology. We also discuss the physician’s role as a social justice advocate and the concept of the public physician.

**INTRODUCTION**

Social media serves as a vehicle for diverse communities to converse, bypassing local, national, and international borders. In 2015, for example, Patel et al conducted a systematic review on social media use among people with a chronic disease (most prominently cancer) and reported that social media conferred a positive impact on these communities through factors such as developing an improved sense of hope, connectedness, and relief from the disease. Taylor and Paglari specifically evaluated the utilization of lung cancer support groups on Twitter, Facebook, and another online organization to determine whether the overall ambience of each network varied by platform. Across platforms, information sharing of guidance and useful suggestions was by far the most common type of engagement (64%, 43%, and 58% of all posts, respectively). Clinicians have similarly used social media for personal and professional support. Facebook hosts the Hematology Oncology Women Physician Group, often referred to as the WoLpack, a private community intended to provide educational content, advice on complex hematology/oncology cases, emotional support, job postings, and opportunities for networking and research.

In one survey of Hematology Oncology Women Physician Group that included 169 respondents, 65% noted having received emotional support from participation in the group, and 55% used it for advantageous networking. The topic of professional development and the role that social media plays are expanded further in a separate paper by Chidhara et al for the Collaboration for Outcomes using Social Media in Oncology.

Still, social media can be a double-edged sword. Although intentions on social media may be to participate in fruitful conversations, educate, or connect with others for collegial and professional support, users can become the target of negative unsolicited interactions and harassment. For example, a 2021 survey invited physicians to describe their experience of harassment on social media and reported that 23% of respondents had been personally attacked, with no difference between men and women (21.9% vs 24.2%, respectively, \( P = .56 \)). The majority of these attacks were related to issues of advocacy (n = 46 reports) such as vaccines, gun control, abortion, and smoking, whereas personal attacks focused on race or religion. Sexual harassment was reported 18 times, with the majority related to inappropriate, sexually suggestive, or explicit messages. Indeed, the anonymity of social
media comes with negative implications. Individuals with biases—whether conscious or unconscious—can exploit it to insult, humiliate, discriminate, and attack others, particularly those who belong to marginalized communities.

The experiences of Under-Represented Minority (URM) clinicians around social media, which occur across medical fields including oncology, do not take place in isolation. Instead, they occur in ongoing realities that remain challenging, such as the lack of representation within the ranks of oncology professionals,7,8 real-world harassment in the workplace,9 discrimination, and systemic barriers to professional advancement.8 Despite this, it is our collective opinion that social media provides the means for URM oncologists to engage together to advocate for diversity, equity, and education (of each other and the general public) and provide support and access shared resources, all of which constitute the benefits that outweigh the potential risks for URM oncologists.

In this article, we expand on the role of social media for URM clinicians, drawing on the literature within and outside of oncology. We introduce the concept of a safe space for online cancer communities, built on the tenets of equity in participation and engagement, inclusive of professional, social, and emotional domains. We focus our discussion on three groups specifically: women; Black, Indigenous, and other People of Color; and sexual/gender minoritized (SGM) people. Finally, we introduce the concept of the public physician for consideration in oncology. The professional use of social media in general is covered separately in prior reviews such as the study by Dizon et al26 and more recent work of Collaboration for Outcomes using Social Media in Oncology members, including Chicharla et al26 and Beltran-Ponce et al.27

GENDER EQUITY AND PROFESSIONAL SOCIAL MEDIA IN ONCOLOGY

For the first time, in 2017, women accounted for the majority of incoming US medical students at 50.5%, after having been at or near parity for over a decade.12,13 Despite this historic achievement, women find themselves facing not only professional inequities, including restricted promotional opportunities, salary inequity, lack of mentorship, limited funding opportunities, sponsorship, and support for traditionally considered feminine issues, such as maternal leave and childcare, but also a lack of practical solutions to help navigate or rectify them. The lived professional experience for women in medicine indicates that they are held to higher standards than their male counterparts, including issues of work performance, social interactions, daily behaviors, and responsibilities at work and home.7 One meta-analysis reported that women in leadership positions received lower performance evaluations than men, which was amplified when women were deemed to act in a stereotypically masculine (or self-empowered) fashion.14 Women were also reportedly evaluated more poorly in situations that involve complex problem-solving, where their expertise is met with skepticism and opinions more often credited compared with their male colleagues, despite having the necessary skills for the complex task.7,15 Even more, sexual harassment continues to be a significant issue as noted recently in a cross-sectional survey within ASCO Research Survey Pool.9 Among female respondents (n = 153), 80% reported sexual harassment by a peer or superior, which was significantly associated with decreased mental health, workplace safety, and heightened turnover intentions.

The bias against women played out in a contemporary example from 2020. That year, the Journal of Vascular Surgery published an article online that intended to evaluate the prevalence of potentially unprofessional behavior on surgeon trainee’s social media pages, which the authors deemed to include the provocative posing in bikinis/swimwear. Its publication was met with a vocal social media response on Twitter, with conversations propagated by the use of the hashtag #medbikini. This paper was highlighted to demonstrate how professionalism was weaponized against women in medicine. A combination of this social media backlash and questions about ethical methodology prompted its retraction. Over time, #medbikini has become a channel for discussion about this issue and the importance of male allyship.13,15

Faced with these barriers, many women have looked outside of traditional forums for professional advice in online safe spaces, defined broadly as environments free of bias or discrimination. A prominent example is the Physician Moms’ Group, which began as 20 friends in a private Facebook group in November 2014 and now comprises a community of more than 70,000 physicians across the globe.16 Members share stories of motherhood and education and have the infrastructure to build connections, from events such as annual conferences and retreats. Members of this community have worked together to provide more insight into the experiences of female physicians with children. In one study that included more than 5,000 surveyed participants, the prevalence of postpartum depression was found to be 25%; perhaps even more concerning, less than half received treatment.17 A separate qualitative study looked at 947 free-text responses to an online survey regarding health and well-being.18 Monitoring by administrators responsible for accepting new members and reviewing new content and who are able to remove access for users who violate the site’s code of conduct are examples of safety measures against those who may wish to use it for purposes other than what it is intended for.

On Twitter, hashtags like #ILookLikeASurgeon and #HerTimessNow have garnered wide support. Indeed, this virality has drawn attention to the real experiences of discrimination and microaggressions in medicine, while promoting women in surgical fields. ILookLikeASurgeon now encompasses topics beyond surgery and reaches
women of all ages, including young girls. It also inspired the hashtag #WomenWhoCurie, launched by the Society for Women in Radiation Oncology in 2018. Between November 6 and 10, 2018 (which coincided with Marie Curie’s birthday), it amassed more than 1.1 million impressions, with global participation from all over the world that showcased the excellence of women in their field.21

RACIAL EQUITY IN CANCER CARE AND THE ROLE OF SOCIAL MEDIA

The Black Lives Matter movement, started in 2013 around the social media hashtag #blacklivesmatter, has laid bare the ongoing inequities in the American society, and this includes the lack of diversity in academic medicine. It is sobering to note that Hematology/Oncology fellowships have consistently ranked last of all Internal Medicine subspecialties in racial/ethnic diversity.6 Although African Americans, Latinx/Hispanic, and American Indian/Alaska Native populations comprise 13%, 18%, and 1.7% of the US population, respectively, they only account for 3.8%, 6.1%, and 0.1% of fellows training in hematology and oncology.622 Even when URM physicians graduate, they work within a system that lacks physicians in leadership positions that look like them or share similar experiences23 or are expected to fulfill roles related to diversity efforts and the mentoring of other URM faculty without adequate compensation, sometimes referred to as the minority tax.24

Faced with such a potentially isolating environment, social media has served as a means to connect Black, Indigenous, and other People of Color physicians with one another to drive awareness, highlight accomplishments, promote empowerment, and address isolation. Mishori et al performed an analysis of conversations related to diversity and inclusion among select user groups on Twitter by an analysis of hashtags, such as #BlackMenInMedicine and #diversityinmedicine.26 In 2017, #BlackMenInMedicine was used by 151 contributors in more than 700 tweets and resulted in more than 8 million impressions. A similar number of contributors used the hashtag #diversityinmedicine (n = 142) and generated far fewer tweets (n = 160) but far higher impressions (at more than 13 million), suggesting that the power of the hashtag is at least in part dependent on those who use it and their individual influence within their social media space. These efforts culminated in the formation of Black in Cancer, an organization with a mission to not only support Black people working in oncology and highlight their contributions to our field but also call for sustained changes and allocate resources to increase their ranks and ultimately, address systemic inequalities.28 Public engagement and education from this organization have been a success, too, with frequent public forums inclusive of guest speakers and offers of mentorship. Quantifying the tangible impacts of how conversations sparked online may address disparities that remain to be explored.

A PLACE AT THE TABLE: SGM PROFESSIONALS IN ONCOLOGY

Despite wider social acceptance in general, SGM providers face systemic barriers within medicine, which have been mostly reported at their earliest stages of training. In a cross-sectional survey that included more than 26,000 medical student respondents, compared with non-SGM students, SGM students reported significantly increased mistreatment, both specific to their identity (27% vs 17.9%, P < .001) and not specific to their identity (17% vs 10%, P < .001), humiliation (27% vs 20%, P < .001), and negativity associated with race/ethnicity (12% vs 9%, P < .001) and sexual orientation (23% vs 1%, P < .001).27 In addition, even simply identifying as SGM person was associated with a 1.6-fold higher risk of burnout (adjusted odds ratio, 1.63; 95% CI, 1.41 to 1.89). Burke and White conducted a 2001 systematic review of the literature between 1996 and 2000 to determine which variables most likely affect the well-being of SGM physicians.28 They concluded that systemic barriers (eg, homophobia and discrimination) were commonplace, making it unsafe for all SGM physicians to disclose their sexual orientation. Instead, they suggested a decision on the basis of the individual’s consideration for his/hersafety. Finally, a survey of more than 5,000 residents in general surgery conducted in 2021 revealed higher rates of discrimination, harassment, and bullying among those identifying as SGM compared with those who did not, with attending surgeons as the most common source of discrimination.29 As a consequence, SGM surgical residents were reportedly twice as likely to consider leaving their program and having thoughts of suicide.

Although a vast amount of literature emphasizes the experience of lesbian and gay physicians in training, very little work has been conducted to inform the experience of transgender professionals.30 Even less is known about the experience of SGM attending physicians; there are little data on how their experiences affect career choice, pursuit of academic versus nonacademic careers, or promotion. Social media has served as a resource for SGM issues in medicine to be highlighted and addressed.31 The Mayo Clinic, founded by physicians, has been an international leader in this. With their prominent presence on Facebook, Twitter, and YouTube, resources such as podcasts and Q&A sessions regarding caring for the SGM have reached an enormous audience.32 In this way, social media can be seen as not just a trend that garners public attention when a hashtag goes viral but rather a firsthand, modernized source of information capable of reaching and affecting broad audiences inside and outside of the United States.
ONCOLOGIST AS AN ADVOCATE FOR SOCIAL JUSTICE AND EQUITY: THE PUBLIC PHYSICIAN

The practice of oncology is not immune to current events, and the rise of social justice movements like #BlackLivesMatter and the ongoing public health controversies around the COVID-19 pandemic has laid bare the inequality experienced by vulnerable and under-represented communities in the world around us. In as much as the Hippocratic Oath compels physicians to practice with adherence to the principles of beneficence, justice, and nonmaleficence, we cannot be innocent bystanders, especially those clinicians with roots in URM communities. Still, whether and how to get involved in current events is an issue that is deeply personal and complicated, as personal alignment to a cause has become an inherently political position. Nevertheless, physicians must be cognizant of our long-standing history of advocacy, whether that be against cigarette smoking, arguing for firearm safety, or combating online COVID-19 misinformation. Our involvement in such causes prompted further support, from governmental agencies and other organizations, in part to the collective realization that disparities have a direct impact on access to care and ultimately to health outcomes.

Social media allows for this advocacy in the digital age and enables clinicians to adopt the role of the public physician, defined by Vartebedian as an individual who considers being in the public to be an essential part of their work. Perhaps this concept is best illustrated by the COVID-19 pandemic. Early on, faced with a shortage of personal protective equipment (PPE), physicians, nurses, and others in health care took to Twitter under #GetMePPE to spread awareness of the dwindling supplies and provoke a call to action to increase production. Subsequently, the movement merged with a physician-led website, GetUsPPE, which quickly organized and rapidly coordinated the distribution of PPE nationwide. The impact of this social movement was not one-sided. Not only were medical workers able to receive massive amounts of much-needed supplies, but the public was also educated and more aware of the issue through the sharing of media, from video tutorials teaching others how to make homemade PPE circulated to the stories that highlighted community support to those on the front lines.

Studies are beginning to measure the impact of individual physician engagement on social media albeit the data remain quite limited. For example, one study from Spain suggested that although the participation of health care professionals (and of physicians specifically) is low, their ability to reach others on Twitter is greater than that of someone not in medicine. It remains crucial to remember that physicians engaging on public forums should do so transparently, disclosing potential conflicts of interest when relevant to the conversation taking place. Care must be taken not to share protected health information on social media, and patients’ privacy should be protected. Physicians and other health care professionals should not post on social media with the expectation of anonymity; sites can track one’s activity through one’s Internet Provider address, enabling eventual identification. In addition, social media posts can be saved by others (in perpetuity), be shared more widely than initially intended, cause unintended harm, or be taken out of context. All this supports a deliberate and purposeful intention on social media.

In conclusion, social media use in oncology has grown substantially in the past decade and its uses are broad and far-reaching. At its very core, social media can be a powerful force that connects people and ideas, promotes community and mutual support, and facilitates the dissemination and discussion of key information. As platforms and the ways of leveraging social media in oncology evolve, it will continue to be of utmost importance to ensure diversity in the user base so that we can achieve true representation. For URM in medicine and in oncology, we need to determine how and if these interactions create an impact, locally, nationally, and globally, and if there is, to define, characterize, and quantify it. Looking at all of us as professionals through an intersectional lens serves to recognize that we are all a complex mix of identities, inclusive of race, gender, sexuality, disability, language, religion, and other social categories and that intersectionality shapes our experiences—as clinicians and as members of a heterogenous society. Determining the effects of those identity interactions in the context of social media requires further investigation. Finally, the challenge that we face is not only creating these communities but also ensuring those that come after us are aware that these spaces exist, engage within them, and benefit from the collective wisdom and experiences of we who have come before.

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Social Media and the Quest for Equity and Diversity in Oncology: On Safe Spaces and the Concept of the Public Physician

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