

Social Media: Flattening Hierarchies for Women and Black, Indigenous, People Of Color (BIPOC) to Enter the Room Where It Happens

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Social media platforms are widely used to connect people across multiple settings, including country of origin, profession, race/ethnicity, sexual orientation, gender identity, seniority, and training. Groups that have been marginalized or historically excluded from decision-making encounters may lack formal mentors/sponsors because of a lack of representation of women and Black, Indigenous, People Of Color (BIPOC) in senior leadership positions. This can serve as a barrier to professional advancement at all stages of career development. Identifying and connecting with these potential mentors/sponsors outside of one's institutional space can be challenging. For this reason, leveraging social media to develop these professional relationships through flattened hierarchies can allow for professional networking beyond traditional mechanisms. Here we aim to describe how individuals can connect through social media to advance their careers and scientific and clinical expertise, advocate for communities, and provide high-quality communication to the public.

Keywords. social media; flattened hierarchies; Black, Indigenous, People Of Color (BIPOC); women in healthcare.

Hierarchies are structures built into society and in biomedicine that influence and perpetuate inequities in academic enrollment, postgraduate training, and faculty positions. From the time people enroll in medical training, they are exposed to these hierarchies in both implicit and explicit ways—including what individual students may have access to, what rooms specialty professionals may enter, and who feels comfortable speaking up in clinical settings. These hierarchies may be historically related to the dynamics of the predominant group represented in medical education but persist even after groups align [1].

For this reason, women and Black, Indigenous, People Of Color (BIPOC) have been historically excluded from leadership positions, leaving them outside of the metaphorical “room where it happens,” referencing the song from the musical *Hamilton* as a reference for being in a position of power to make important decisions. Despite women surpassing men as matriculants of medical and pharmacy school in recent years, they are still considerably underrepresented in senior faculty and leadership positions—for example, deans of schools

of medicine and pharmacy, while BIPOC individuals remain highly underrepresented in senior faculty and leadership [2–8]. The inequitable advancement of women and BIPOC in health professions is both a pipeline issue (not enough people applying and matriculating) [9–12] and a retention issue (too many people leaving prematurely or being forced out) [13–15]. These challenges create undesirable downstream consequences, which stem from a lack of representation of mentors with whom female and BIPOC trainees can identify for sponsorship and promotion [16, 17]. This lack of representation perpetuates hierarchies that suppress network-building, including sponsorship and opportunities necessary for career advancement and promotion, including speaking invitations, publication collaborations, and committee service. For example, a leader asked to recommend a colleague will think of senior faculty of which there are few women and BIPOC individuals.

As this hierarchical structure disproportionately impacts women and BIPOC, steps must be taken at multiple levels to improve this. Social media is a meaningful way for individuals with limited access to networks to bridge the gap. Social media can be a valuable tool for personal and professional growth as it can allow individuals to create networks with like-minded individuals. It can amplify the voice to those who feel invisible and provide a platform for individuals to build their brand, promote their work, and/or curate unique content in their area of expertise. The many ways that individuals can use social media for

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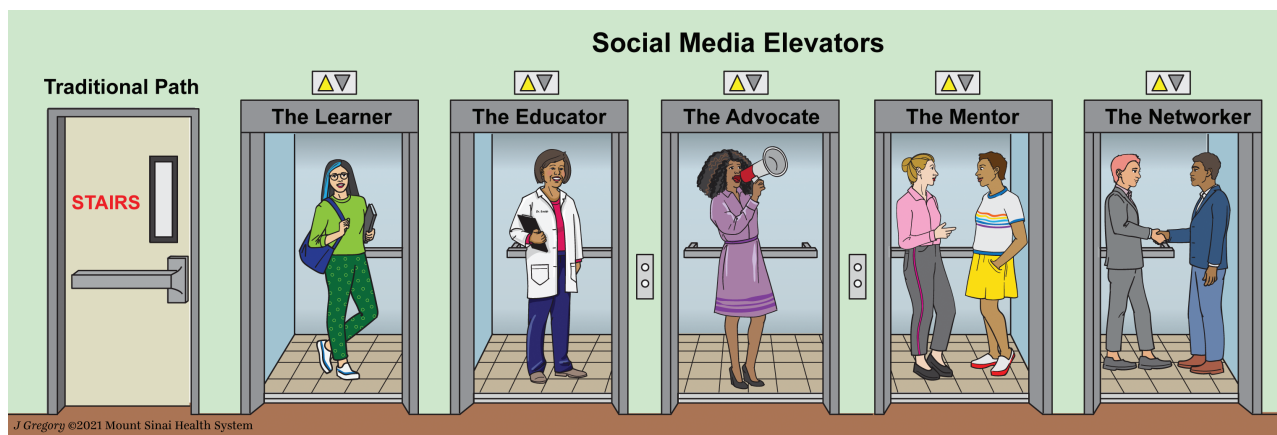


Figure 1. Five roles in which one may engage with social media. Each of these roles includes overlap in which the same individual may engage in multiple ways or use these over different stages of their career. The “learner” is a consumer of information and uses this for education. The “educator” is a poster and curator who disseminates work for the education of others. The “advocate” is someone who uses social media to disseminate material on behalf of specific groups, individuals, and policies. The “mentor” serves as a resource for others in providing advice and guidance to others. The “networker” brings people together and builds their brand through dissemination of content.

these varied objectives can be broken down into 5 overlapping categories, described in Figure 1.

The “learner” uses social media to consume information, either in clinical medicine, scientific research, professional skills, or others. They may not regularly post but may curate a list of trusted accounts to follow. They may be in a trainee role, but one can be a learner at all stages of their career. The “educator” uses social media to teach others, either through reposting content or creating original content to educate others on clinical medicine, scientific research, professional skills, or others. They may be at any career stage and use their expertise to educate others. The “advocate” uses social media to advocate for specific policies or groups. Advocacy to target populations can be done through targeted messaging to those in leadership positions whose policies impact the target population. The “mentor” uses social media to provide advice and guidance to others. This person may reciprocally benefit from the mentoring of others as a mentee. The creation of mentorship connections through remote networking allows individuals to receive advice outside of their immediate circle and provides a more rounded global perspective from those who may have related experiences in different settings. The “networker” uses social media to meet people across the continuum and leverages this for professional advancement. The networker may receive speaking invitations and collaborations based on their social media engagement.

The common theme of these roles is that they allow for flattening hierarchies [1, 18]. The relationships can be reciprocal, and one’s authority is not dependent on their level of training or seniority on the academic ladder. It levels the playing field, creating horizontal mentoring and networking opportunities that can positively advantage career advancement and personal growth, especially for women and BIPOC individuals who have traditionally faced these challenges.

HOW SOCIAL MEDIA CAN BE USED FOR FLATTENING HIERARCHIES

Professional Development

Mentorship relationships that develop online tend to be bidirectional, with mentors helping mentees and vice versa [19]. For example, finding mentors through Twitter serves to supplement traditional mentorship available through an individual’s institution [20]. This can be an especially invaluable path for women to find same-gender mentors in fields where women are traditionally underrepresented. It provides a broader pool of potential mentors and sponsors [21–23]. Since geography is not a barrier online, be it on Twitter, Facebook, Instagram, or other social media platforms, this gives greater access to those in positions of power, such as residency program directors, potential employers, and educators from around the globe [24–26]. Medical students interested in a specialty where their school does not have a home program can benefit from the perspectives of those at other institutions. Surprisingly, #MedTwitter and #TwitterRx (pharmacy twitter) users are often candid on their profiles, giving glimpses of personal life and views outside academia [27]. By sharing more information about themselves, mentors become easier to identify and are more approachable.

Furthermore, for students and residents, Twitter can be an opportunity to see real-life examples of what blending their chosen career path with an online presence may look like in the future [28, 29]. A benefit of Twitter mentorship is that the relationship can take many forms; it might be a more regular and deep connection for some. For others, it is quick mentorship interaction to get advice about training or career [1, 30–33]. One example is physician-scientist careers in which women and BIPOC individuals are significantly underrepresented, but this represents a vital career path to serve the biomedical research needs of marginalized communities [34,

35]. Awareness of the field is limited by access through traditional mentoring but can be accessed more readily through mentoring on social media. The American Physician Scientists Association created a Virtual Summer Research Program for future physician-scientists from underrepresented groups [36]. This program recruited many mentors using social media in order to match mentees and allow them exposure, particularly during the pandemic, in which in-person mentoring was limited.

In academia, disparities abound. Multiple studies have revealed disparities in high-quality research output and citations by race and gender [37]. Social media has had a demonstrable impact on increasing citations [38–42] through promotion of work, especially early after the publication is available. Recognizing that citations are a critical measure of researchers' impact can allow others to leverage social media networks to promote each other's work.

Sponsors are individuals positioned at high levels in organizations or medical societies who can influence decision making—for example, open the doors to get people “in the room where it happens.” Sponsorship is an essential component of professional development, particularly for promoting women and BIPOC faculty and trainees [6]. Engagement on social media can allow immediate access to potential sponsors, eliminating the need for a middle person. While the sponsorship may begin as mentoring or collaboration, nurturing the relationships developed on social media may yield dividends in the form of recognition, committee memberships, speaking engagements, promotion, and leadership opportunities [32]. For example, individuals may request letter-writers for academic promotion; they may be known by their social media work on decision-making committees. They may be more likely to be recognized when thinking about potential speakers.

Building Community

For example, where academia, medicine, and pharmacy are concerned, Twitter has created space to develop micro-communities for individuals with shared identities and interests. This is particularly important for groups who are underrepresented at their institutions and may be seeking others who have experiences elsewhere. For example, #LatinasInMedicine was founded in 2019 as a way for Latinas to connect [43]. Many of these groups support underrepresented individuals: #LatinxInPsych, Black Psych Docs, Latinx in Pediatrics, Black Women Doctors Network, American Association of Black Physician Scientists, and #BlackTwitteRx [44–46].

These groups are beneficial in building community, introducing users, celebrating accomplishments, and disseminating information about opportunities. These online communities create a microcosm for members to be authentic, find their voice, and exchange views together while promoting each other's professional development [47].

Beyond supporting freedom of expression, social media facilitates connecting with like-minded individuals and others outside of one's sphere of influence to answer questions and spark creative initiatives that work toward a common goal [48]. Social media has the power to connect people across the globe, and both bring people sharing common interests and creating diverse teams with creative ideas. Here are some examples of projects that arose from social media collaborations, and there are many more:

- A Twitter conversation was the inspiration to create a free e-book, *The Free Guide to Medical School Admissions*, written by #MedTwitter students, residents, and physicians to support premedical students who may not have access to advising [49].
- In response to the cancellation of medical school graduation ceremonies for the Class of 2020 due to the coronavirus disease 2019 (COVID-19) pandemic, several Twitter users (mainly students) and organizations came together to plan a virtual commencement. The #HealthSTEMencement featured congratulatory messages from prominent #MedTwitter figures and celebrities [50].
- A medical student and physician partnered to launch a mutual aid initiative called #medgradwishlist (organized by Farrah-Amoy Fullerton, MD, and Jennifer P. Rubin, MD) for medical students from underrepresented groups to cover the costs of preparing for the transition to residency [51].
- Noting the success of the #medgradwishlist several pharmacists connected via Twitter to launch the #pharmgradwishlist dedicated to supporting emerging BIPOC students and trainees as they matriculate through the pharmacy profession [52].

Several research collaborations leading to publications have been borne out of networking connections that started on social media platforms, transforming these spaces into invaluable hubs for connecting with others, exchanging ideas, and developing new opportunities to collaborate, including by the authors of this article [34, 35, 53]. During the COVID-19 pandemic, leading principal investigators have used Twitter to disseminate early findings from their groups, recruit new post-doctoral scientists, communicate their scientific contribution to a general audience, etc.

Advocacy

This past year has been filled with many events that have brought to the forefront the harsh realities experienced by minoritized groups due to systemic and structural racism [54, 55]. COVID-19 has amplified the degree to which systemic racism contributes to inequities in healthcare, leading to disproportionately higher mortality rates for BIPOC individuals than their White counterparts [56, 57]. The deaths of many unarmed Black Americans at the hands of law enforcement

have ignited nationwide advocacy and invigorated a global movement for racial justice and equity [55]. The medical community has played a central role in leading conversations on social media platforms to highlight the many injustices experienced by minoritized patients and the racial inequities that persist in its ranks from the trainee level to the highest echelons.

The tragic death of Dr. Susan Moore due to COVID-19–related complications ignited conversations on the inequitable treatment that Black women often receive when seeking healthcare, irrespective of educational or social status [58]. Through her death and Twitter hashtags that emerged in the wake of her passing (#DrSusanMoore #SayHerName), many women of color described their own experiences of racism as patients utilizing the healthcare system. The advocacy ignited by Dr. Moore’s death has extended beyond online spaces, generating open discussions on the impact of race in health disparities and ways to address these disparities within medical institutions.

Vaccines have been a cornerstone of the fight against the COVID-19 pandemic. Vaccine distribution has unfortunately been mired by low uptake in certain groups [59–62]. Scientists and health professionals have embraced social media as a megaphone for immediate communication with broad reach, including vaccine advocacy and combatting misinformation with hashtags like #ThisIsOurShot and #vaxxed to increase educational outreach on COVID-19 vaccinations [63]. The use of social media for sharing infographics and engaging educational videos can quickly become viral and have the potential to reach millions well beyond the geographic location of their original creators.

With rampant misinformation and confusion during the pandemic, having access to trustworthy scientists and public health officials is critical to building confidence in vaccines and reassuring the lay public [64]. The role of advocacy and outreach on vaccine equity in BIPOC communities with a long history of mistreatment in scientific research cannot be overstated; BIPOC voices in healthcare have led the charge in highlighting and acknowledging the many past errors while providing perspective on why these life-saving vaccines must protect the most vulnerable communities [65–72].

Social media has also allowed BIPOC professionals to seize the moment and voice their struggles with discrimination and racism in academia. Identifying others with shared experiences lessens the feeling of isolation and not being able to speak up. An excellent example of this is the #BlackInTheIvory movement borne out of Twitter, which created a safe space for Black individuals in academia to share their negative experiences. Critical to this movement was a window for non-Black academics to see the magnitude of the problem and the need for change. This movement has blossomed into commitments by influential organizations in academia to do better in fighting racism and promoting diversity and inclusivity in academic spaces [73].

CHALLENGES FACED BY WOMEN AND BIPOC ON SOCIAL MEDIA

While social media can play a significant role in amplifying the voices of women and BIPOC, leading to recognition and respect of their expertise, online spaces can be treacherous to navigate as well [74]. It is not uncommon to be on the receiving end of harassment and backlash by bots or individuals who may not agree with a tweet or a post that does not align with their worldview. Women frequently experience sexism and undermining of their opinions. BIPOC professionals are more likely to be harassed, targeted by bots, or lose followers for posts commenting on racism and social justice issues [75]. Figure 2 describes ways that women and BIPOC individuals can both benefit from and face challenges through social media.

Sharing one’s views with a large online audience may come with additional scrutiny on how one’s professionalism is judged and can lead to a significant backlash in some cases. Tweets limited to 280 characters do not lend themselves to nuance or can convey an unintended tone, opening the door to misinterpretation. An example that gained media attention recently was that of a Black female pharmacy student at the University of Tennessee who was threatened with expulsion for Instagram and Twitter posts deemed inappropriate for their sexual nature; the student is currently embroiled in a lawsuit to safeguard their right to complete their education [76].

Although protected by one’s freedom of speech, the backlash for social media posts disproportionately targets women and

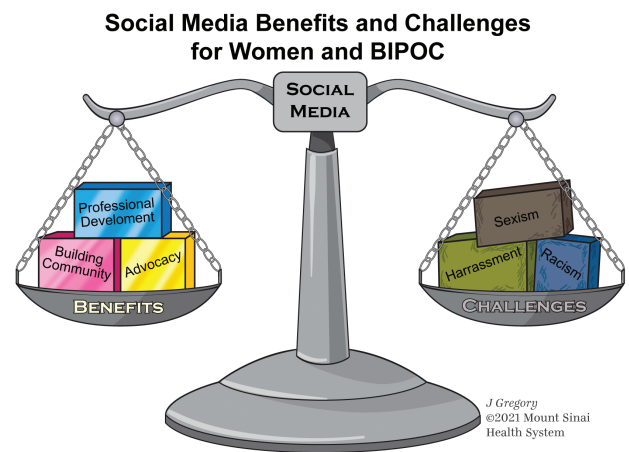


Figure 2. Social media benefits and challenges for women and BIPOC. There are numerous benefits to using social media for women and BIPOC, including professional development, building community, and advocacy. Because of existing disparities, social media has the power to transcend barriers to allow methods of advancement outside of those traditionally limited settings. There are also exist notable challenges faced by these groups. These include discrimination, harassment, and backlash. BIPOC professionals are more likely to be harassed, targeted by bots, or lose followers for posts about racism and social justice. Women and BIPOC individuals are more likely to face scrutiny and institutional consequences for “professionalism” concerns as compared with their colleagues. Abbreviation: BIPOC, Black, Indigenous, People Of Color.

BIPOC who are overrepresented in more junior positions and are less likely to have the protective buffer of tenured positions in academic institutions. This disparate treatment has been evident during the COVID-19 pandemic. Effectively leveraging social media for professional growth requires balancing its many potential benefits with these common pitfalls. For some, that may mean setting boundaries on which topics they engage in and with whom, recognizing when a platform becomes toxic for one's well-being, and knowing when to take breaks. Importantly, what one posts on the internet is permanent and may be the only window that others may have to form an impression about them [77].

CONCLUSIONS

Social media platforms have transformed the way people across multiple settings connect, including geographic region, the field of expertise, race/ethnicity, sexual orientation/gender identity, and academic rank. Groups marginalized or historically excluded from decision making often lack formal mentors/sponsors in senior leadership positions. This can serve as a barrier to professional advancement at all stages of career development. Social media platforms provide a unique opportunity for enhanced connectivity and networking opportunities. How it is used can be leveraged to develop professional relationships and flatten hierarchies beyond traditional mechanisms. By creating connections through social media, women and BIPOC can advance their careers, increase visibility and recognition of scientific and clinical expertise, advocate for communities, and provide high-quality communication to the public. Ensuring that flattened hierarchies, achievable on social media, extend beyond online spaces to becoming the norm across institutions remains the ultimate goal. What happens in real life off-line has the most significant impact in creating diverse and inclusive environments with equal opportunities for all to thrive.

As there are significant challenges for women and BIPOC to use social media, it is a personal decision to weigh the benefits and challenges based on one's individual experience and goals. It is important to recognize that the emotional impact of some of the challenges can outweigh the benefits or that individuals can find ways to detach from the challenges and attempt to selectively leverage the benefits. Social media can be used to provide support in this decision making, which can evolve over time with emerging needs and understanding.

Finally, it is important to note that the term Black, Indigenous, People of Color (BIPOC) encompasses multiple groups of people with individual minoritized experiences. The authors have attempted to provide a general overview of the ways in which minoritized individuals might experience challenges and some strategies to overcome them, but recognize that this designation does not appropriately represent the nuanced differences among communities and how this may manifest professionally. For this reason, individuals should work to build communities

to ally themselves with those who are like-minded and learn about others' shared and contrasting experiences. Social media is an important means to engage in this learning journey.

Notes

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