

# What TikTok teaches:

**Women's health and medical misinformation**

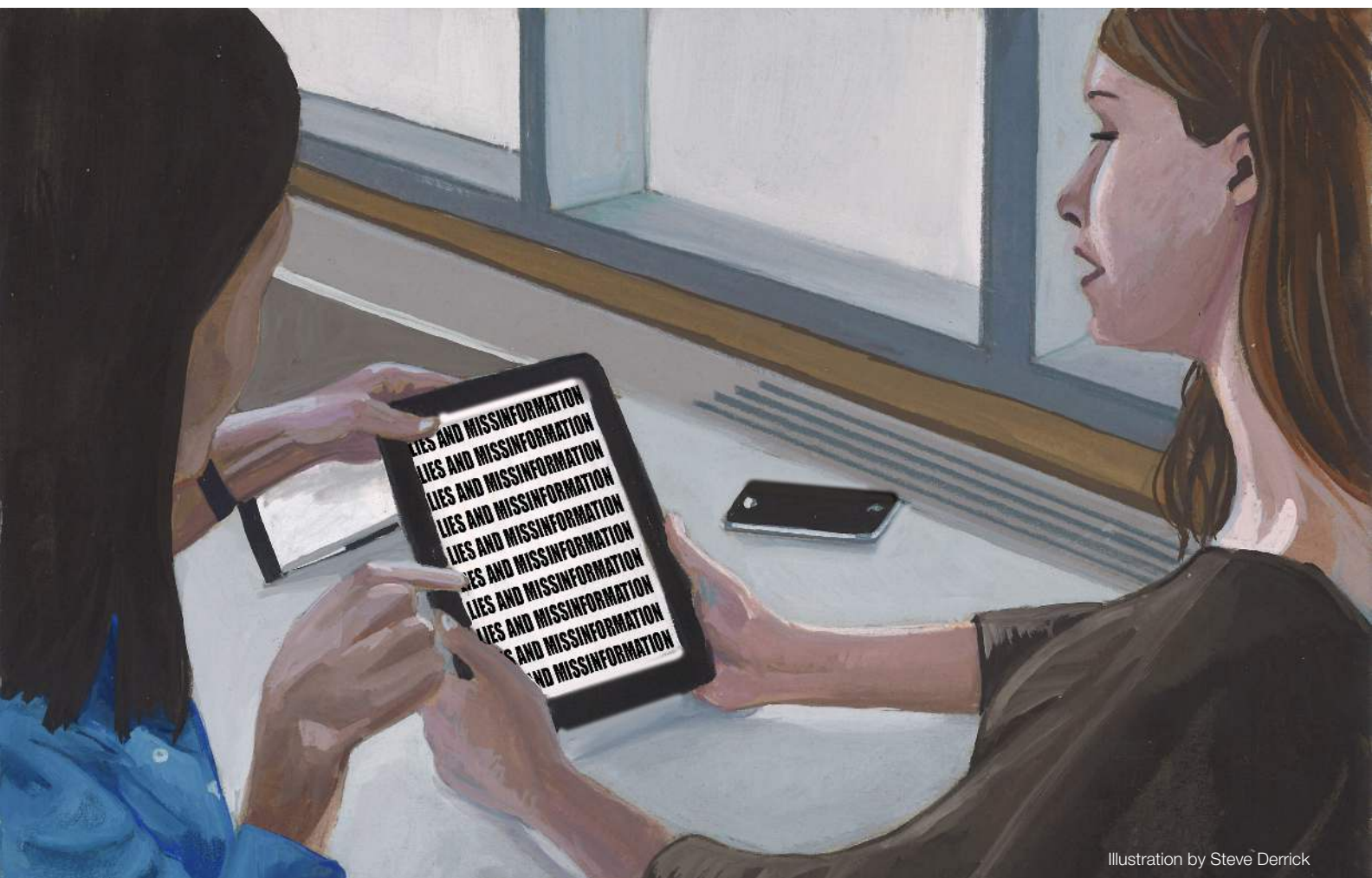


Illustration by Steve Derrick



**Madelaine McElrath**

Ms. McElrath is a third-year student at New York Medical College, Valhalla, NY. She is the recipient of the third place award (a three-way tie) in the Alpha Omega Alpha Honor Medical Society 2023 Helen H. Glaser Student Essay Award.

If you ask any medical student about how they use their free time you're likely to hear, perhaps bashfully, about how much time they spend on TikTok. Late night scrolling through TikTok instead of sleeping, and amongst videos of cats or viral dances, there are more and more women speaking up about their experiences with health care.

Medical students straddle the line of lay-person and professional, and because the TikTok algorithm takes account of the user's perceived interests, and the "For You Page" reflects this.<sup>1</sup> When a student interested in Ob/Gyn opens TikTok for a studying reprieve, they are shown video after video of women recounting their conversations with their gynecologists and obstetricians. Many of these stories are tinged with resentment or outright anger. In the comment sections there are threads of women echoing sentiments of fear of getting a pap smear, or mistrust for their practitioners after being refused pain control for IUD placements.

What led to this type of oppositional relationship between patient and provider, and how can communication be remediated?

Patient trust in the medical system had been declining in the United States prior to the COVID-19 pandemic. A survey of U.S. adults in 1966 reported 73 percent of patients had trust in medical professionals, compared to 34 percent in 2012.<sup>2</sup> When the entire world was faced with a novel coronavirus in 2020, the evolving scientific landscape and disjointed public health messaging left patients confused.

Around the same time, the TikTok app experienced a huge rise in popularity, presenting a new avenue for information spread.<sup>3</sup> Since physicians tend to stray away from speaking in absolutes without validated evidence, an opportunity arose for confident pseudoscientific claims to circulate on social media. As these theories went viral, the prevalence of videos sharing the same information fostered "social proof" of their legitimacy, creating confirmation bias.<sup>2</sup>

While pandemic hysteria has now subsided three years later, this phenomenon remains, and every field of health care is at risk of a similar fate.

The issue of misinformation exists all over the Internet, but a combination of features make TikTok particularly problematic. The most recent data, as of February of 2023, shows that 113 million people use TikTok in the U.S., more users than any other country.<sup>4</sup> As of March of 2021, 61 percent of Tiktok users were female, and as of April 2022, nearly half of the users were between the ages of 18 and 34.<sup>5,6</sup> In addition, 48 percent of users ages 18 to 29-years-old state that TikTok is their main source of news. These users are less likely to be white and more likely to have lower levels of education.<sup>7</sup> This means that a significant proportion of users of the app are women of childbearing age with less formal education, exposing a vulnerable group to potentially harmful rhetoric. These users are left on their own to filter through credible and non-credible sources, in a landscape where creators can forgo stating their credentials, or can vaguely refer to themselves as a doctor without substantiating their claims.<sup>2</sup>

The beauty of TikTok as a platform lies in its ability to foster a more realistic dialogue between the creator and their audience. The front-facing format and informal nature of Tiktok can lull a viewer into feeling like they're in a conversation with a friend. Anecdotes are salient, because a creator who looks, sounds, and acts like a friend feels relatable and trustworthy. When this is coupled with misinformation, re-education can be hard to achieve. A doctor may be inaccessible, but Tiktok videos are available 24/7 when an anxious patient is looking for answers.

Not only can viewers comment on each video, but they also have the ability to create their own video "stitched" to the original in response. Similarly, creators are able to respond in video format to individual

## What TikTok teaches

comments. This can be used as an asset to medical providers in the fight against misinformation, as they can provide an engaging response in plain language to direct questions. However, TikTok misinformation is able to spread much faster than busy health care professionals are able to educate.

Unlike other social media formats that are also often used for long-form discussions and information, TikTok's algorithm presents topics to the user spontaneously. To find information on most sites, a user typically has to seek it out themselves, or follow individuals adjacent to the topic. A TikTok user does not have to add any friends on the app or follow any accounts in order to see content.

Because of this, much of the content is random.<sup>8</sup> On TikTok, the algorithm collects data—even as subtle as the amount of time spent lingering on a particular video—in order to generate new related videos.<sup>9</sup> Progress from first exposure to a topic to an armchair expert can be achieved in a very short timeframe. For example, the instant that a pregnant woman interacts with a post about pregnancy, their “For You Page” recalculates to inundate them with information about topics such as natural births, epidurals, and vitamin K injections. When faced with such an overwhelming amount of opinions, who is a patient to trust? This results in a proportion of women who are skeptical of their health care providers' intentions.

A frequent criticism on TikTok of induction of labor or C-sections, for instance, centers around patient belief that OB/GYNs choose inductions for patients not for evidence-based reasons, but for personal convenience or financial gain. This potentially adds context to the scientific literature on the topic, with one study finding that more than one fifth of women who have delivered in U.S. hospitals report that they perceived pressure from their OB/GYNs to undergo a C-section or labor induction, and that patients who felt pressured had higher odds of actually being induced or having a C-section.<sup>9</sup>

New studies being done on TikTok usage are attempting to quantify the prevalence of these negative feelings. One of the first studies in obstetrics and gynecology about the types of discussions being had on TikTok showed that out of a sample of videos hashtagged “#IUD,” 37.8 percent of them portrayed a negative tone and 27.6 percent of them expressed distrust of health care professionals.<sup>10</sup>

Given the historical lack of inclusion of women in clinical research, skepticism about medical recommendations is not entirely unfounded. Guidelines about the inclusion of women and minority populations in

NIH-funded research only came about in 1990.<sup>11</sup> This is compounded with the history of reproductive medical abuses toward communities of color since the beginning of modern gynecology with J. Marion Sims, persisting to present day with the increasing evidence of racial disparities in health care.<sup>12</sup> These factors lend lingering suspicion about the legitimacy of medical recommendations, and create a compelling case against the health care system for anxious patients.

On TikTok, many women warn others about use of hormonal birth control for myriad reasons including risk of depression and anxiety, infertility, or cancer. Those who post videos stoke fears of “unbalanced hormones,” taking advantage of patient frustration with vague and persistent symptoms like fatigue and weight gain. The online attitude shift away from hormonal birth control comes at a particularly concerning time, given the recent Supreme Court of the United States (SCOTUS) decision to overturn *Roe v. Wade*.<sup>13</sup>

Perhaps most frightening is abortion misinformation on TikTok, potentially jeopardizing patient safety and well-being. The SCOTUS decision has prompted video creators to share herbal recipes for home abortifacient treatments, many of which are incredibly toxic.<sup>14</sup> These home abortion management techniques can also delay patients from seeking care, and may keep patients from being honest with emergency providers when they do seek care for detrimental outcomes.<sup>14</sup>

There are many valiant attempts by Internet-savvy physicians to combat misconceptions on TikTok, but a common thread through the negative sentiments is that patients feel dismissed when they are in the clinic or an inpatient. It's important for providers to be aware of the type of rhetoric that is spreading online, and get ahead of it when they are establishing rapport with patients. There needs to be a foundation of mutual respect and trust between an individual and their provider to prevent misinformation from taking hold.

To ignore the role that TikTok plays in patient education is to be set up for failure against the growing power of social media influence. Whether it's TikTok or another platform, social media is an increasingly present force in the lives of patients, therefore it is essential that the medical field does not miss opportunities for creating real-life connections.

Maybe all of the time medical students spend on TikTok now is not such a waste after all, but what will help the next generation of doctors attempt to repair the growing divide between physicians and their patients.

## References

1. Bhandari A, Bimo S. Tiktok And The “Algorithmized Self”: A New Model Of Online Interaction. *AoIR Selected Papers of Internet Research*. 2020. <https://doi.org/10.5210/spir.v2020i0.11172>.
2. Baker D. Trust in Health Care in the Time of COVID-19. *JAMA*. 2020; 324(23): 2373.
3. Feldkamp J. *The Rise of TikTok: The Evolution of a Social Media Platform During COVID-19*. Springer International Publishing EBooks, New York (NY): 2021. 73–85.
4. Statista. TikTok users by country. Statista February 10, 2023. <https://www.statista.com/statistics/1299807/number-of-monthly-unique-tiktok-users/>.
5. Statista. TikTok MAU user ratio in the U.S. 2021, by gender. July 27, 2022. <https://www.statista.com/statistics/1095201/tiktok-users-gender-usa/>.
6. Statista. TikTok usage distribution in the U.S. 2022, by age. May 31, 2022. <https://www.statista.com/statistics/1095196/tiktok-us-age-gender-reach/>.
7. MacKinnon KR, Kia H, Lacombe-Duncan A. Examining TikTok’s Potential for Community-Engaged Digital Knowledge Mobilization With Equity-Seeking Groups. *Journal of Med Internet Res*. 2021; 23(12): e30315.
8. Ostrovsky AM, Chen JR. TikTok and Its Role in COVID-19 Information Propagation. *J Adolescent Health*. 2020; 67(5): 730.
9. Kozhimannil JJ, Johnson MPJ, Sakala C. Patient-Perceived Pressure from Clinicians for Labor Induction and Cesarean Delivery: A Population-Based Survey of U.S. Women. *Health Services Research*. 2015; 50(4): 961–81.
10. Wu J, Trahair E, Happ M, Swartz J. TikTok, #IUD, and User Experience With Intrauterine Devices Reported on Social Media. *Obstetrics & Gynecology*. 2022; 141(1): 215–7.
11. Vidaver RM, LaFleur B, Tong C, Bradshaw R, Marts SA. Women Subjects in NIH-Funded Clinical Research Literature: Lack of Progress in Both Representation and Analysis by Sex. *Journal of Women’s Health and Gender-Based Med*. 2000; 9(5): 495–504.
12. Washington HA. *Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present*. New York (NY): Double Day Books. 2006.
13. Espey E, Haider S, Stone J, Gyamfi-Bannerman C, Steinauer J. (2023). Now is the time to stand up for reproductive justice and abortion access. *Amer J Obstetrics and Gynecology*. 2023; 228(Issue 1): 48–52.
14. Gupta AH. Experts Warn Against ‘Herbal Abortion’ Remedies on TikTok. *The New York Times*. July 22, 2022. <https://www.nytimes.com/2022/07/11/well/herbal-abortion-tiktok-mugwort-pennyroyal.html>.

The author’s E-mail address is [mmcelrat@student.nymc.edu](mailto:mmcelrat@student.nymc.edu).