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Social Media: A Pandemic of Misinformation



In the shadows of a novel viral pandemic that ravages our country and the entire world, a pandemic of different sorts bares its fangs. This beast is far different from any virus or bacteria that we have seen before. It has been waiting patiently for an opportunity to strike, slowly growing its dominion while we naively enabled it to do so. It laughs at the primitiveness of requiring contact or respiratory mediums to spread [genetic] material. We have laid the foundations for this beast to spread to practically anyone in the world nearly instantaneously. This beast is social media.

With the increasing popularity of social media platforms such as Facebook, Twitter, Instagram, Tik Tok, etc., we have found a way to connect with hundreds, thousands, and even millions of people with a means that was never possible in the past. In regards to infectious agents such as the current SARS-COV-2 virus, infectious disease specialists and epidemiologists will often refer to a basic reproduction number, R_0 , to help describe the ability of an infectious agent to spread. This number essentially tells us how many people an infected individual is likely to pass their infection to. With the current COVID-19 pandemic, the R_0 for SARS-COV-2 is about 5.7, but more certainly in the range of 3.8-8.9. If we assume the low end of this range and select an R_0 of 3.8, we can predict that a single infected individual will spread their infection to approximately 3.8 other individuals. This results in an exponential spread of the infection or disease in question.

What happens if we apply the principle of R_0 to social media and the ability for a post or shared video to reach other individuals on a given platform? I have been on Facebook for approximately 11 years at the time of writing this article. Currently, I have around 400 “friends” on my Facebook profile. If I make a post or share a video to my Facebook profile, any of these 400 individuals may see that post. If we assume only 1% of those individuals will see my post, that would provide an R_0 of 4 for my profile. Keep in

mind that this can be a nearly instantaneous spread to those 4 individuals, as my post shows up immediately and they are able to access it immediately via their phone, computer, or tablet. I looked into my group of 400 friends and observed the average number of friends among those 400 profiles to be approximately 524 people. This would imply an average R_0 of 5.24 if we again assume a very conservative spread to 1% of profiles. I acknowledge that this number may be slightly inflated among my personal group of 400 friends, as I have had social media for many years and my generation of peers has been on the forefront of social media since its appearance over a decade ago.

Social media penetrates into parts of society that may never even see SARS-COV-2. Remote rural parts of the country that self-isolate themselves as part of their daily lives may very likely never encounter pandemic infectious agents, but they are just a click away from being exposed to a post on social media that may have originated anywhere in the world. This leads to the issue of misinformation and its newfound medium of spread on social media. I have seen numerous posts and videos being shared over the past months filled with misinformation in the forms of bias, conflict of interest, and blatant lies. Prominent posts that come to mind include the private practice urgent care doctors from California, as well as the former molecular biology researcher at the National Institutes of Health in the mini-documentary “Plandemic.” Both of these videos were posted or shared by hundreds of thousands of people, and interacted with by multiples of those initial numbers, leading to a widespread reach to millions and millions of individuals throughout our country and the greater world.

The issue with social media lies in its ability to instantaneously spread to any part of the world. In the past, misinformation and conspiracy theories may have only reached a small group of tens or perhaps hundreds of individuals closely connected with the person who initially stemmed that information or theory. Now, with a single click, we can share anything we want with hundreds of individuals we are not physically connected with. With a large proportion of people in our country remaining home over the past several months due to the COVID-19 pandemic, I have personally noticed a much larger presence on social media from my personal group of 400 “friends.” I have to imagine that this is the case for many, as being home enables us to

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access social media and other venues that we would not typically be accessing while at the office or place of work. This has only exacerbated the issues I have discussed in this article.

Social media is not going anywhere. Its presence has and will continue to grow as technology continues to advance. Individual social media platforms have, in recent years, begun to blend together with the ability to share posts and videos from one platform to another. It is safe to assume that the presence and penetrance of social media will only increase over the coming years. My initial speculations and assumptions based on my observations over the past months warrant further research on this topic to better understand the impact of social media and misinformation on medicine and society as a whole.

What is our role as doctors and other health care professionals in this age of social media? Do we have a responsibility to fight against this new-age pandemic that spreads more widely and quickly than anything we have seen before? Like the current COVID-19 pandemic, social media is something that we very likely will continue to face for years to come. We must keep in mind this ever-looming threat to the integrity of our practice of medicine.

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