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Geri Amori, PhD, DFASHRM: Hello, everyone, and welcome to *Healthcare Perspectives 360*, a podcast dedicated to exploring contemporary healthcare issues from multiple perspectives. I'm Geri Amori, and today I am joined by Michelle Mello, JD, PhD, a health law scholar at Stanford, John Robert Bautista, RN, MPH, PhD, a postdoctoral teaching fellow at University of Texas, Austin focusing on health misinformation, and Brian Southwell, PhD, who is a scientist focusing on science misinformation and the public sphere at RTI International. Welcome.

Today, we are talking about how misinformation creates disparities in healthcare for patient populations and how the problem is affecting marginalized populations. So let's begin. Brian, it's been said that distrust of the healthcare system is linked to an easier spread of misinformation. Why might this be true or not?

Brian Southwell, PhD: Yeah, thanks, Geri. You know, I think this notion of trust as vital to the discussion, is really important for us to keep in mind. You know, trust is absolutely likely to be part of the remedy as we deal with misinformation. That said, I also worry that we sometimes, you know, misunderstand exactly what's going on, you know, here. I don't know that it's fair to say, for example, that there are certain folks that are just inherently, you know, never going to believe, you know, what's said or that are inherently mistrustful. I think we see ebbs and flows in different dynamics over time. And something that we do know from empirical literature is that the more the people understand about how the process of science works, the more that they have confidence in scientific institutions.

And so I think a big part of the equation that's been missing for much of the popular discussion about this is that we don't necessarily have widespread popular understanding of the scientific processes that generate our evidence. So, we tend to focus on, you know, relationships with different institutions, but we don't necessarily realize that, well, people don't necessarily always even understand the process of peer review. And so the more confidence that you have in scientific institutions, you know, the more likely you are to pay attention to whether a source is peer reviewed or whether a piece of journalism relies on peer-reviewed evidence.

So I think the key to all of this is really increasing—or a key, anyway—is increasing people's understanding of the scientific process. And I tend to have a lot of faith and confidence that, you know, with more widespread understanding, that we actually would have, you know, less ready acceptance of misinformation under many circumstances.

Amori: Okay, so you're saying that better understanding of the scientific process might really help us here if we had more widespread belief in that. That's good. Hey, Robert, well, you know, the World Health Organization shared the viewpoint that the healthcare infodemic—meaning too much information, including false or misleading information—has impacted both the US and non-US underserved populations. Do you believe that's true, and how might misinformation affect behaviors in vulnerable groups?

John Robert Bautista, RN, MPH, PhD: Okay, it's important to point out that, based on literature, belief in misinformation is linked to a lack of health literacy. And having a low health literacy

makes it difficult for someone to distinguish true and false health information. And what we do know is that low health literacy is a global problem that greatly impacts those that are socioeconomically disadvantaged population, whether they're in a developed country or in a developing country. So what happens that, if people lack health literacy, they're susceptible to health information that is unreliable that might be spread by close contacts.

More often what happens is that, in cases where there is low health literacy, they also don't have access to appropriate healthcare, so they don't have interactions with health providers that can provide the correct health information that they need. For instance, in one case at least, we go in the context of the US, the Kaiser Family Foundation study in 2021 showed that a greater belief in misinformation is linked with poorer healthcare decision making, such as not deciding to take a COVID-19 vaccine. So we have issues on health literacy even in a developing country.

On the other side of the globe, for instance, back in my hometown in the Philippines, we had this controversy about dengue vaccines wherein…that was in 2017. And that was a flashpoint in the spread of vaccine misinformation even before COVID-19 happened. So it did lead to vaccine hesitancy for COVID, also other vaccines, and that is the problem. Plus, health literacy is really a concern that needs to be addressed if we want to address health misinformation.

Amori: That's a good point, and I hadn't thought about it from that perspective. In fact, haven't some studies been done that show that just among general population, the health literacy is so low that most adults are not really health literate. They may be literate in other ways but not health literate. That's a good point.

So, Michelle, medical misinformation isn't new. We've already kind of talked about that a little before when we were prepping for today. I was thinking about the historical tobacco industry's attempts to camouflage, you know, secondhand smoke risks years ago. Does the current misinformation spread echo similar disproportionate effects upon different sociological groups? If so, whose fault is that? Who's responsible? You know, eventually we blamed big tobacco in the past, and we blamed drug companies. We blamed social media platforms, or are we blaming the victims themselves? What do you think?

Michelle Mello, JD, PhD: Well, the question about disparate impact is an interesting one. I think Robert's already spoken to that a little bit. I will add that one interesting wrinkle for vaccines, which is the area that I work the most in, is that historically it has not been primarily low health literacy/vulnerable populations that have been vaccine hesitant, you know, and driven by misinformation. That the classic demographic is actually someone who looks like me, you know, a middle-aged, middle-upper-income White woman who is well educated and, you know, "does her own research."

So it's quite interesting that during COVID, the demographic base—the target audience for this misinformation—has broadened in, you know, some pretty pernicious ways. You asked, you know, who's responsible. You know, this time I think there are some distinctions to historical cases where misinformation or disinformation has been a problem in public health like efforts of tobacco companies to sow doubt about health-related harms of smoking or efforts of polluting industries to sow doubt about the existence of acid rain and other environmental harms.

You know, there are certainly still companies out there—like those hocking COVID cures—that have participated in misinformation in recent years, but the base of speakers is broader now, and they're not all just sowing misinformation in order to further their economic self-interest as a business. I think it's a more complicated constellation of different voices with different motives. And the maybe most interesting development is the degree of entanglement between a certain segment of the Republican population and misinformation.

There are, you know, known links now between right-leaning PACs—political action committees—and organizations that antivaccine and that operate under the general rubric of health freedom. And, you know, health freedom has been a tagline that, again, certainly not all Republican politicians but a certain kind of Republican politician in this political moment has found it expedient to kind of pick up as a platform for themselves. So it's this joining of folks who historically have been opposed to vaccines with a much broader swath of the population who is upset about COVID restrictions and desires the so-called health freedom that now has made it possible for speakers of misinformation to get their message out much more broadly because they're not restricted to their own accounts on social media anymore.

They find amplification in certain politicians who get airtime, and of course, on certain mass media networks themselves, like Fox News, that has found viewership in programs that promulgate this kind of information. And again, that's not to say that all these speakers believe themselves to be spreading misinformation. Perhaps some do. Many probably don't. You know, and I often think about there's this line in *Seinfeld* where George is trying to coach Jerry on passing a lie detector test, and he says, "Remember, it's not a lie if you believe it." That is probably the case for a lot of the voices that have joined this movement today that they believe in the cause of health freedom, and they believe specifically in this information. And so trying to think about it as we have thought about kinds of misinformation in the past can sometimes be a little bit confusing.

Amori: That makes sense to me. It is confusing. And you're right because people believe a lot of things, and they don't believe that they're spreading misinformation. Well, Robert, in November, Twitter lifted its ban on COVID misinformation. Lifted the ban on COVID misinforma…basically saying it's okay to spread misinformation. So does that mean that Twitter is supporting misinformation or they're taking responsibility, or they're denying responsibility? Can you elaborate on how social media algorithms magnify or potentiate disparate and inequality in treatment? Like certain people like follow certain leads, right? Tell me more about this. I'm confused.

Bautista: Twitter and other social media platforms have a gaping role in the flow of information. And lifting the content moderation on COVID-19 misinformation really caused concerns to public health advocates. It coincides with one of the moves of Twitter in the time that Elon Musk took over the company wherein he promised that Twitter would uphold free speech. And that's part of the event wherein he also reactivated Donald Trump's Twitter account, but I mean, Donald Trump doesn't really use Twitter now, but the account is already active. So that's part of ways that he upholds free speech, at least from his perspective, on Twitter.

And since Twitter will not control the extent by which COVID misinformation was being spread, we just have to rely on users to report if a tweet is considered misinformation. Unfortunately, users do not necessarily report the tweets. Research shown that people often ignore: if they see misinformation, they don't bother about it. And the implication there is that you can be exposed to information that confirms the real-world view because the algorithm is set up to provide you information that you think that is relevant for you. So you risk having an information echo chamber wherein the algorithm can predispose a person to be exposed to the same information we repeatedly expose to them.

For instance, the misinformation, and that is a vicious cycle that keeps on continuing. So although we encourage people to crosscheck their sources, that is easier said than done. Especially when vulnerable populations often lack health literacy to discern what is true and what is false health information. So that is really problematic.

Amori: Yeah, it is. But, Brian, you know, we have health disparities here, we know that, in social classes and socioeconomic classes. And so based on Michelle and Robert just said, can you share an overview of the correlation between this widening disparity in health and misinformation, or is there one?

Southwell: I think it's very relevant for us to think about health disparities in this conversation as we explore misinformation. It's really important, though—we talked about a little bit earlier, you know—avoiding victim blaming. And I think on this particular question, we really have to be careful not to engage in victim blaming. Just because there are people who are suffering, you know, from health disparities, of course, there are many. Just because there are those folks, and they also have access to low-quality information, you know, by and large. It doesn't mean that folks who are suffering health disparities inherently like misinformation more, wish to have that, you know, to be trafficking in that.

Doesn't mean that they're actually even anymore psychologically, you know, more vulnerable. You can offer comments about, you know, their ability to discern, you know, peer-reviewed evidence and that type of thing, but generally speaking, there's a lack of evidence that suggests there's a causal order here that somehow misinformation is to blame for the structural racism and the structural disparities that we have in this country. And I think, you know, we've got to be careful. We wouldn't want to blame, you know, people for living in a poor part of town for the state of their neighborhood, you know, just because of somehow their inherent character.

And I think we've got to shine a light on, you know, the structural disparities that got us into this situation. Now, the misinformation that people have instead of higher-quality evidence that's not helping anything. I mean it's certainly not helping them, you know, close the gap with regards to disparities. But I just think it's important to not sort of view misinformation as the beginning of this chain reaction and the sequence, but rather just a really unfortunate dysfunctional part that's happened along the way in the system.

Amori: Yeah, that makes a lot of sense. It would be easy to blame the misinformation, too, that would be just as bad. Michelle, sometimes the voices spreading this misinformation on social

media are actually people with MDs or RNs or, you know, things after their name, they're healthcare professionals. What do you think about that? What is their role?

Mello: Overwhelmingly, healthcare practitioners—especially during COVID—have been just a tireless force for good in trying to help people understand the complexities of what's going on and how it affects them and what they can do to protect themselves. But there have been a small number of physician voices that have a lot of volume and that gained a platform either in social media or in mass media or in the political leadership structure very quickly because of their contrarian views. You know, I think the effect has been pretty significant. We've been talking about how difficult it can be for people to distinguish reliable and unreliable information.

And when you have a person with medical credentials, who seems to have an awesome pedigree and seems very trustworthy and is listened to in the halls of power and is spreading this information, you know, it has an impact. And we also shouldn't forget historically the entire antivaccine movement essentially started because of an article published by a physician, Andrew Wakefield, that linked the MMR vaccine to autism. That study was subsequently discredited, but the myth persists and is associated with this physician's work. So this is a big problem.

We know that among all of the agents of medical and scientific messages, people trust their physicians the most by far. Far more than any government agency or scientist, they trust their personal physicians, and again, some of these physicians have been elevated to positions where their voice has a long reach. So it is certainly a concern and there's, you know, been writing by medical ethicists about the extent to which promulgating misinformation should be thought about as a violation of the Hippocratic Oath, which is to do no harm, because it does.

Amori: Thank you, Michelle. Okay, we're coming to the end of our talk today. So, if you would, I'm going to ask each of you to give us, in one sentence or two, the one thing that you want our audience to take away. Let's start with you, Robert.

Bautista: Well, medical misinformation is here to stay as a public health threat, and we need to ensure that everyone becomes resilient to it.

Amori: Thank you. Brian.

Southwell: I think, ultimately, we have to think a lot more about our information systems and their nature, you know, how we got, you know, to this point in time. And we have to think about the effects of structural disparities and trying to account for the nature of our public health. And we've got to worry less, I think, about blaming individual people for falling victim to misinformation. We have to view the problem of misinformation as a societal one, and I think that we have to understand that there are societal-level remedies that would benefit all of us.

Amori: Thank you. Michelle.

Mello: I think what strikes me is that, although we've been talking about how misinformation is not new, there are some distinctive things about our current moment, both in terms of the diversity of speakers of misinformation and how broad the audience for their messages has

become. You know, in an age of COVID, in particular, that's just deeply concerning, and it's especially concerning because of the difficulty of rolling back false beliefs once they take root.

Amori: Thank you. Thank you. Thank all three of you. This has been an amazingly great conversation. And I really want to thank our panelists and our listening audience. I hope our discussion today has provided you with some new insights. Thank you, again, for joining us, and we'll see you again next time on *Perspectives 360*.

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