Season 4 Episode 4
Medical Misinformation and Disinformation
Transcript

Co-Hosts: Dr. DJ Gaines and Branden Barger
Guests: Dr. Tracey Henry
Editor/Assistant Producer: Emily Han
Production Assistants: Alexandra Babakanian, Leyna Nguyen

[0:00-1:16] Welcome and Introductions

Dirk Gaines: Welcome to The DEI Shift, a podcast focusing on shifting the way we think and talk about diversity, equity, and inclusion in the medical field. I'm Dr. DJ Gaines, an internal medicine hospitalist, and one of the senior producers of The DEI Shift, and my co-host today is...

Branden Barger: Branden Barger, a second-year medical student and producer for The DEI Shift. Today, we will be discussing a topic that has been at the front and center of the COVID-19 pandemic: Medical Misinformation and Disinformation. While the concept of mis- and disinformation is not necessarily new, we are sort of in the midst of a resurgence in its prevalence and witnessing firsthand how mis- and disinformation can affect the health of a nation and the globe as a whole. Many entities have taken a stand against misinformation and disinformation in an effort to tackle this growing problem.

DG: Indeed, with the advent of social media, misinformation can spread at a rapid pace. In the United States, the US Surgeon General released a statement during the height of the pandemic, but even still, it can be difficult to recognize mis- and disinformation and effectively combat it.

[1:16-2:44] Introduction to Guest: Dr. Tracey Henry

BB: So with that, we would like to introduce our guest for today's episode, Dr. Tracey Henry. Dr. Henry is an Associate Professor of Medicine at Emory University. She is also the Assistant Health Director of the Grady Primary Care Center and the Director of the Health Equity Advocacy Policy track for Emory's Graduate Medical Education Program. At the medical school, Dr. Henry serves as faculty student advisor, EMPACT Program Director which is a structured mentoring program and stands for Engage, Mentor, Prepare, Advocate for, Cultivate, and Teach students who identify as underrepresented in medicine in a supportive and inclusive learning environment, and she's also the inaugural curriculum thread director for Diversity, Equity, Inclusion and Racial Advocacy. In her free time, she enjoys checking out the local food scene and going on long walks.

TH: Great. Thank you so much DJ and Brandon for having me here today and for that warm welcome. I am definitely a foodie, but don't ask me about my favorite restaurant and food. I really just love the experience and the anticipation of trying new foods and cultures, and really, it's more about the breaking bread with friends and family over a good meal. And so I usually get excited about that.

DG: Thank you for sharing all that, Tracey. And as you know, at the DEI Shift, we like to keep things casual here. So in addition to asking you that you call us by our first names, may we call you Tracey?

TH: Yes, of course.

[2:44-4:38] A "Step in Your Shoes" Segment

DG: Excellent. Thank you once again, Tracey. Before we get started today about today's topic, we like to ask each of our guests on The DEI shift to share something with our listeners about themselves. This can be something like a hobby, favorite food, or a meaningful experience of yours that helps us get to know you and your background a little better and to flex our cultural humility muscles. We call this our "Step in Your Shoes" segment.

BB: So Tracey, what would you like to share with us today?

TH: Thank you, Brandon. Well, I'd like to share that you know, I live in the suburbs and the long walks that I mentioned previously, or you mentioned previously, especially during COVID-19, really amplified my wellness. And before then, I really didn't make a whole lot of time for exercise as I should have, but it really became super important to me during the pandemic and I've continued on in that fashion. It was really the fresh, clean air, which was so invigorating to me after a long day of wearing two masks and safety goggles. And since I lived so far away from so many people, several hundred feet away from other people, it was really easy for me to just go on long walks, which was pretty safe. And it was actually a time where I was actually allowed to be really creative, because it allowed me to think and relax and not be so uptight as I would be in the height of the pandemic when you're concerned about catching COVID before there were vaccines, before there were tests. And I was able to do a lot of problem solving

during that time and listen to podcasts, like the DEI Shift, and my favorite music. But another point I really wanted to make was that it was also a time for me to catch up with my family. So whenever my family joined in on those walks, we really took time to listen to each other, listen to nature. And most importantly, we detached from social media and it became a tradition that we continue to do now, and we look forward to our regular evening walks.

[4:38-6:50] Medical Misinformation and Disinformation Definitions

DG: We are very excited to do this particular episode, just given the relevance with the ongoing COVID-19 pandemic. So, why don't we start off with some definitions. Tracey, can you define for us Medical Misinformation and Medical Disinformation?

TH: Definitely. And actually, I would like to highlight the recent report from the Surgeon General Dr. Murthy's report on confronting health misinformation that actually came out last year. So, health misinformation is actually “false, inaccurate, or misleading according to the best available evidence at that time.” Whereas disinformation its purpose is really “to intentionally serve as a malicious purpose, such as to trick people into believing something for financial gain or political advantage.”

And really, I like to think about misinformation and disinformation, and there's actually a third category of malinformation. And I like to think about misinformation as really, false information. It's those gaps in knowledge. It's really an honest mistake. For example, posting an out-of-date article or guideline. Whereas disinformation is really deliberate. So disinformation is deliberately false information and the intent is to deceive. And the third category, which is malinformation, also the intent is to deceive. And what is different about this one is that it takes factual information based in reality with an intent to harm. And so an example of that would be in the beginning of the COVID-19 pandemic. There was this picture circulating all throughout social media that showed a particular culture seeing licking their plates and they were licking their plates so as to not waste food at the end of the day. But then, under the caption, it said that they're spreading COVID-19 through this way. This was a factual picture, but it was not used factually and was actually used with an intent to harm.

BB: That is actually an interesting distinction that you made between disinformation and malinformation because I feel like we don't usually hear much of a nuanced difference between those two definitions. And so, thank you for sharing that.

[6:50-13:36] Psychological Drivers of Misinformation, Disinformation, and Malinformation

BB: The one thing that I think comes to mind is from the Surgeon General report, as well as how you so eloquently put it. It seems kind of easy for us to define what these are: misinformation, disinformation, malinformation. But, clearly those things are still gaining traction and are continuing to evolve to like new heights, especially within our social discourse and our current rampant media cycles. So, in your experience, what do you feel are some of the drivers, be it psychological, social, structural any combination of the three? What do you feel are some

of those drivers that may be precipitating this misinformation, disinformation, and malformation? And why does it seem like these concepts spread like wildfire?

TH: Thanks, Branden. Well, what we know is that falsehoods or false information, fake news, all of the different terms that we are currently hearing, tend to spread easier and faster. And that's because credible information is often complex and nuanced, as you previously stated, and evolving and uncertain. So, how do you really express that information to our patients and to the public when things are constantly changing and we are unsure ourselves? And so message content have to have a specific source. You know, the format and health literacy really matters. The ability of our patients to understand that information matters and many patients actually sort of lack what we call this media literacy. And that is one way misinformation or disinformation has been able to spread like wildfire.

But, I will also add on that social scientists have actually identified at least three key factors which govern how people absorb information, form beliefs, or modify their behaviors. And really, what's interesting about these three key factors is none of them have little to do with the actual truth. And I'll start with the first and the first one is social contagion. And so we have social contagion, we have framing, we have worldview. But with social contagion, it's really what it sort of sounds like. It's people's tendency to think and act like their friends and family. For example, smoking is an example and behaviors spread through social networks simply by jumping from person to person, kind of like a real virus. So growing up in the fifties and sixties, a lot of students and adolescents, people in high schools, saw their friends smoking and thought it was the cool thing. And so then, they started smoking and it's sort of that social thing. We want to be accepted. And it's an adaptive etiology and it's really important for self-verification. We want to be like everyone else and we feel more comfortable when we conform to situations, especially when uncertainty is high, like in COVID-19.

And then the second one, social contagion followed by framing. Framing is where it evokes a deeper narrative that already exists in our minds. So this is where the ideas that we're hearing in the media, we hear from friends, that we hear on social media platforms, things that are already kind of connecting to what's already in our minds and how we've been socialized. And it's also those cause-and-effect storylines. And what's interesting about cause-and-effect storylines is that they can be quite powerful and invoke very negative emotions, such as fear, anger, or even disgust. And I'll give you this example. And this particular example, if you were to hear that a medical expert working for the government found a causal link between vaccines and autism, but federal lawmakers influenced by the powerful pharmaceutical lobby helped to bury the information. So this statement that I said was false, but if you are a layperson listening to this, it sounds structurally coherent. It sounds easy to grasp and recall. And the way that we form our memories and our mental cues is we store the bottom line, meaning, or gist. And so, framing is sort of like storing that bottom line. We hear the gist, not necessarily the facts, whatever sounds really structurally coherent, whatever that we can make sense very easily in our mind without exhibiting any extra sort of cognitive power.
And then we move on to the third psychological driver. So we started out with social contagion and then we moved on to framing, and now the third one being worldviews. And this is where

we have preexisting internal stories based upon our mental view of cultural knowledge, beliefs, and life experiences. And an example of that would be if we were to hear a flu shot induces a fourfold increase in non-flu acute respiratory infections. So, if you were a layperson and you heard that, the only thing that you probably heard was, "Oh my gosh, the flu shot causes respiratory infection, so I need to step back and not take the flu shot." But that's not really what we want to convey because to a healthcare professional, we probably heard, "Oh, what is this story? What is the problem? How was this particular study powered?" But to the layperson, they're thinking, "Oh my gosh, I better not take the flu vaccine."

And so when we think about all of these different psychological drivers we have to be really careful that because we have psychological drivers, our social contagion, our influences, our worldview, our framing, it's really hard when we hear someone else contradict what's already internal to what we think. So that's why what we've seen in COVID-19 easily backfires. So when we say, "Oh, you need to get the vaccine, and this is gonna be helpful to you more than it could harm you," people are holding on to their original information stronger than before because this is what was tied to their worldview, their social contagion, and their framing.

DG: That's very powerful, Tracey. Actually, when you said that, it reminded me of the concept of narratives that was in the recent AMA Health Equity Guideline. And they had that nice little, for those who are familiar, they have a nice triangle that describes how narratives work. At the bottom is "Message." Next is "Story." Next is "Narrative" and on top is a "Deep Narrative." And a lot of what you're saying sounds like there is, it's hard to go against these deep narratives that a lot of people have. And when, like you were mentioning, they hear a friend got sick from the COVID-19 vaccine, that kind of reinforces this narrative that they already have in their head. And so it's very, it's when it gets deep like that, it's just so difficult.

[13:36-16:35] Challenges of Combating Misinformation, Disinformation, and Malinformation

DG: And kind of on that note as physicians, we see this all the time. You know, we are combating so much medical misinformation and disinformation. So knowing this, like what are some challenges that you see physicians and other allied health professionals face as we look to combat medical misinformation, disinformation, and malinformation?

TH: Thank you, DJ. So in misinformation, some of the challenges is really that misinformation confuses everyone by diluting the pool of legitimate information. And again social media platforms are a huge challenge right now because they're designed to keep people engaged, and what engages people, right? It's sensationalism. It is those likes, those comments, those retweets, those are the things that keep people engaged and that's what keeps the ad dollars coming. And so that's another challenge that we are seeing in combating misinformation and disinformation.

And you know, another thing is that misinformation provides also again, as I said before but not to this extent, that it provides comfort of an explanation in times of uncertainty and anxiety. And

you know, it revolves around all of these core emotions and values. And when it's framed in sensational ways, it really can distort our memories. It can align with our cognitive biases and then cause us to have a heightened sense of awareness, heightened psychological responses, like anxiety. And so those are a lot of the challenges that we were seeing.

And then another challenge in terms of a public health threat that misinformation is, is it really becomes a nidus for infection. And what I mean by that is that whenever you have the information in voids and data that we're seeing, especially around COVID-19 and the beginning and even now as we're still figuring out how COVID-19 is going to manifest itself in years and decades to come and those who have been infected, it provides an opportunity for those with malicious intent to manipulate the situation. And what we've been seeing a lot is what we call the "broken clock" problem. For example, in the beginning of the pandemic, we saw there were a lot of sources that were traditionally incredible or unbelievable and they, in the beginning, were the ones that actually called COVID-19 an outbreak. They even said it was a pandemic very early on and were actually right for once, like a broken clock. So now afterwards, they're able to say, "Oh, see, we were right. Look, we got this right. And so, we're right about everything else." And that was a challenge as well for us, the broken clock problem, the nidus for infection. How do you communicate misinformation and uncertainty, and prevent anxiety and the idea that misinformation really confuses and dilutes the pool of legitimate information?

[16:35-18:00] Consequences of Misinformation and Disinformation

BB: Sort of the same vein as consequences and challenges, what do you kind of foresee as specific consequences for healthcare, whether they be consequences specific to patients or consequences related to misinformation and disinformation?

TH: I really think this is a collective consequence, and it's a detriment to our society and it's a threat to public health. The main consequences of medical or health misinformation, disinformation, and malinformation is really that it sows a seed of distrust in science and in healthcare treatments, things that are evidence-based that we've studied and we are well aware of. And it can lead to poor health outcomes and death, especially the things we've seen around the COVID-19 vaccine when the vaccine itself has been more beneficial than harmful as it saves lives.

And we also have seen this with vaccines, like the MMR and people were saying that MMR causes autism for children. And then when we see that and the parent fails to get their child vaccinated, then that child contracts measles with lasting effects. So it's really a detriment to public health. It's a detriment to our individual health, our community health, and misinformation must be combated.

[18:00-19:56] Difficulties in Responding to Medical Misinformation and Disinformation

DG: Having these discussions with patients is very difficult. I can say from personal experience, I remember during the height of the pandemic, there were several patients that would refuse to

get screened for COVID because they thought that these screening tests were fake, essentially, that they were gonna turn positive and that this was part of the whole kind of plan by the government, essentially. So, I know for me, it's very difficult. And so I'm just wondering why is it so difficult for health professionals to respond to medical misinformation and disinformation?

TH: Yeah, well, there are a few reasons and beginning our professional obligation, what is that? And I was looking through the AMA, they have the Journal of Ethics and they state that our professional obligation really is to confront false beliefs. And that is more straightforward within a clinical setting. So we usually are all pretty okay and pretty comfortable when we hear something incorrect in the clinical setting. We know that it's professionally and ethically appropriate to address it and redirect patients if we need to. But my question to you both, and to our audiences, really what do we do outside an individual patient-physician relationship?

You know, what is the obligation of a healthcare professional to the broader community to confront false beliefs and information? And I think that's where there is some hesitancy, so to speak, in the beginning of the pandemic where does my role begin and end? We know for sure in the clinic setting, but what about outside the clinic setting? So I will argue that the same as the causes of disability and death extend far beyond the boundaries of our clinic, so do the obligations of physicians and other healthcare professionals. And so, I think those were some of the reasons that made it really difficult for us in the beginning to respond to medical misinformation and disinformation.

[19:56-22:12] Ways to Respond to Misinformation and Disinformation

DG: My next question as physicians, we tend to be first line responders to, as you mentioned too, to misinformation and disinformation. So what are some ways we can respond to this and why might this be a difficult process to undertake?

TH: Sure. I would like to begin with what we call psychological inoculation or prebunking. And so prebunking, it's the opposite of debunking and it's one way that we can address misinformation. And it's more like preventative medicine where we refer to techniques that build preemptive resistance to misinformation. So there were several researchers out there in the field. I actually use a few examples from Dr. van der Linden at the University of Cambridge, England. He's a social psychologist. But basically, prebunking borrows from the logic of vaccines, so a little bit of something bad helps you resist a full-blown infection. So like a vaccine, it works by exposing people to small doses or examples of misinformation or misinformation techniques to help them recognize and reject them in the future. And really what they're essentially doing with prebunking or psychological inoculation is triggering the production of “mental antibodies”.
And so I really like the way that sounds, it's triggering the production of mental antibodies against misinformation and training people to detect faulty arguments. And it really addresses all of those three psychological factors that you guys asked me about earlier. And it can lead to what we call psychological herd immunity, or just herd immunity, to informational disorders, so to speak. So basically, if enough individuals are immunized from the “informational virus”, then it

won't be able to spread. And so just like with framing, it shows people how they're being duped versus telling us that we're being duped. Or with social contagion we can capitalize here on our tendencies to want to conform to social influence. So if other people are immunized and recognizing the issues, then we want to recognize the issues and that we're being duped on the front end.

[22:12-27:05] Using Strategies in One's Own Medical Practice

BB: I have to say you are quite artful with your metaphors. This is wonderful to kind of relate these sort of mental strategies to our ongoing social ethos related to the pandemic. It's very timely to say the least. You mentioned that there were some strategies, like prebunking and mental inoculation. How do you foresee those strategies or examples that you use in your own practice?

TH: Branden, that is a great question. And I usually have to stress to folks, I believe that prebunking works based on some of the studies that I've seen out there, but unfortunately, a lot of what we're doing in clinical practice is actually debunking. So, they've already been exposed to the misinformation or to the virus, so to speak, and so we're playing catch up.

But, to your point, there are opportunities, especially if you read the Surgeon General's report, that we really should start working on media literacy and media education for our patients. This should be maybe a community strategy, things that we offer in our hospital teaching our patients, so the same way we talk about prevention, getting your colonoscopies, your mammograms, your flu vaccines once a year. Also, just educating patients on numbers, literacy, how to figure out what's fact versus fiction, and who are the credible sources. And so those are things that we can actually do and even teach in the clinical setting when our patients, when they come in, for instance, to their primary care visits.

But specific strategies that I use in my practice, and again, this is more on the debunking side because things have already occurred and they've already heard the misinformation, is really just acknowledging my patient's fear and recognizing that shame and blame do not work. So I just want to let you guys know and I'll repeat again, shame and blame really do not work. And I think a lot of sort of our old school mentality with working with patients is we think that we instead of being a shared decision, sometimes we think that we are the person that kind of just tells them what to do without discussing. But what we want to do, really, is acknowledge their fear. We want to educate them. And whereas we have time in the busy clinical visit talking about media literacy and again, where to find reputable information, such as from physicians like ourselves, our nursing staff, other healthcare professionals, the CDC, and local health departments. And then lead with their values, their "Why?" You know, why should they get vaccinated? And then follow up with maybe some facts and stay calm. You know, sometimes we get really irritated and we've been seeing patients. We've seen patients die throughout the pandemic. And so we may get sometimes a little heightened, but we have to really just remain calm and really take time and listen to our patients.

And I do just want to add a couple other things that I usually say, like this language, and I actually adapted some of this language from the Smithsonian Institute's discussion on how to talk about race. And some actual language that I use is sometimes I give the patient the time and space they need, and I may ask something like, "Could we revisit this conversation about vaccines (or whatever it is the misinformation is on) in the next visit?" And sometimes I'll offer a fact-checking tool. So the patient may say, "Well, I saw this on this social media platform." And then I may say to them, "Well, I was curious about the thing that you posted, or you said that your family member posted. So I also did some searching and here's what I found." And so basically you're saying you went to social media or you went to this online platform and see, I'm doing the same thing, and this is what I found, but I'm going to a reputable site. And I also like to engage with empathy by providing a personal story. And sometimes I may say, "Well, I remember that time I shared false information." And sometimes that's a great entry point to opening things up and allowing your patient to feel safe and vulnerable to talk about the issue at hand.

And the last final piece in terms of language I use in the visit in educating my patients about how scientific research works and that is, it takes time to conduct research on new diseases like COVID-19. And so recommendations may change based on the data available, and sometimes that puts people at ease. Sometimes it doesn't, but they at least know that we're acknowledging that things are constantly changing, but we are giving you the best information possible.

BB: I think we could all hopefully implement those into our individual practices.

[27:05-29:32] Strategies to Increase Our Media Literacy

BB: You mentioned earlier potentially providing patients with a media literacy training or health information-related training or education. And what I want to ask is almost the exact opposite in where we see a large group of newer physicians who are starting to bolster their professional careers by moving onto these online platforms, be it, Facebook, Instagram, even doing TikTok dances with snazzy captions. My question to you is: as a physician or as we train new physicians, what are some of the specific tools we can recommend to them so that they are being health literate? How they are being savvy online and producing content that is relevant to patients, it's helpful for patients. And at the end of the day, it's not contributing to, again, the sort of misinformation and disinformation wildfire.

TH: Well, that's a great question, Branden. I think the most important things going forward for new learners and, and those that are engaging in social media to help combat misinformation is to number one, make sure that you are tapping into reputable information sites, like your local health department, like the CDC, or even reputable medical experts. And you may be wondering, who are the reputable medical experts? These are people that are often verified by different social media platforms. So at the beginning of the COVID-19 pandemic, one way to combat misinformation was to make sure that physicians and public health professionals, nurses, any of those who are teaching and educating our patients and communities were verified in advance so that we know that the information coming from them was reputable. So,

you can tag those sites. You can double-check and triple-check that what you're saying is the most accurate and up-to-date. Those are a couple strategies and specific tools that you can use when engaging in social media.

BB: I think also just pausing before responding. I think we usually get so caught up in wanting to make sure information stays as relevant as possible, but part of the issue is not necessarily fact-checking ourselves as we're responding. So really just making sure that we're doing our due diligence.

[29:32-31:26] Take-Home Points

DG: Well, thank you so much Tracey for joining us today. We had a fantastic conversation and we really appreciate your insight and wonderful metaphors. Do you have any take-home points or resources you would like to share with the audience?

TH: Sure. So some of my take-home points really is that inoculation or prebunking cannot be the only solution, but it could be the first line of defense. But in most cases, we are actually debunking once a patient has already been exposed to misinformation and disinformation. And in those cases, we want to make sure that we use facts and don't lecture our patients when they come in, that we build on our current relationships with our patients and focus on shared goals.

Don't challenge core beliefs, because as I said before, because of the psychological drivers, a lot of us hold onto those and if we try to use corrective action too soon, it can backfire. We have to start meeting people where they are along, sort of, this misinformation spectrum. You know, are they confused by all the information? Are they skeptical of the science? Do they have a steadfast belief that there are assaults on their liberty at play? And so we have to think about all those things when they come into the clinic visit.

And then finally our approach, we did spend a whole lot of time on this, but how do we address this from a global, national strategy perspective. And that is that we need a cross-sectoral approach. Medicine alone cannot solve misinformation. We need computer science. We need tech. We need behavioral science. We need education and public policy. But we do, as physicians, play a pivotal role.

Finally, in terms of resources, a really great one that I mentioned earlier that came out in 2021 is the Surgeon General's report on confronting health misinformation. It's an excellent resource with strategies to employ. Thank you.

[31:26-31:58] Closing

DG: Thank you for listening to another episode of The DEI Shift! As always, we encourage you to keep the conversation going by following us on Instagram and Twitter at the handle @theDEIshift or emailing us at thedeishift@gmail.com.

BB: And you can also head to our website at www.thedeishift.com to access further resources on this topic, as well as our learning objectives, show notes, and full transcript of this episode. And don't forget to share our podcast with your friends and family. We hope you can join us next time!

[31:58-33:08] Outro

Disclaimer: The DEI Shift podcast and its guests provide general information and entertainment, but not medical advice. Before making any changes to your medical treatment or execution of your treatment plan, please consult with your doctor or personal medical team. Reference to any specific product or entity does not constitute an endorsement or recommendation by The DEI Shift. The views expressed by guests are their own, and their appearance on the podcast does not imply an endorsement of them or any entity they represent. Views and opinions expressed by The DEI Shift team are those of each individual, and do not necessarily reflect the views or opinions of The DEI Shift team and its guests, employers, sponsors, or organizations we are affiliated with.

Season 4 of The DEI Shift podcast is proudly sponsored by the American College of Physicians Southern California Region III Chapter.

The DEI Shift theme music is by Chris Dingman. Learn more at www.chrisdingman.com.

Contact us: thedeishift@gmail.com, @thedeishift, thedeishift.com

Resources

- US Surgeon General 2021 report on Confront Health Misinformation
- Finding a Vaccine For Misinformation
- AMA Journal of Ethics article: “Why Health Professionals Should Speak Out Against False Beliefs on The Internet”
- AMA Adopts Policy To Combat Misinformation
- Misinformation and Public Opinion of Science and Health
- Where We Go From Here: Health Misinformation on Social Media
- Australian Government to Introduce Laws to Combat Misinformation, Disinformation

Last updated: 10/04/2020