Video One - What features of peer review foster trust in science?

Amanda Woodward: Hello, Dr. Srinivasan. Thank you for speaking with me today about peer review and trusting peer review for peer review week. So I have a few questions that I'd love to get your thoughts on. The first is, what features of peer review foster trust in science?

Malathi Srinivasan, MD: Well, I think the main thing is that peer review is an integral part of the scientific process without external review. It's very hard to know whether the findings that you're reading are heavily influenced by the author's bias or if it's been well vetted by the scientific community. Science specifically is supposed to build step by step on what's known and even a new hypothesis. This proposing something new needs to be grounded in the evidence of the current and the present. So when we take a one step forward, we need to make sure that there's no errors that are being made. And important perspectives that are being missed and without peer review. It's very hard to know that what you're getting is relatively unbiased.

Amanda Woodward: Thank you. Yes, that really clarifies it.

Video Two - What would improve trust in the peer review process?

Amanda Woodward: So this next question is, what would improve trust in the peer review process?

Malathi Srinivasan, MD: There's a lot of controversy about the best way of doing peer review. What we know right now is that there's been an erosion of trust in science, due to the misinformation that is continuously coming out regarding important issues in healthcare. And to be able to combat that, you have to ask, what's the best way of having people review other people's information and how can we increase transparency. So, to me, the major point is to have as much transparency as possible. And the real question, I think in peer review, is should peer review be blinded or unblinded? So there's lots of ways of blinding. You can blind the peer reviewer to who the authors are, you can blind the authors to where the peer reviewers are, knowing that everybody has some kind of personal bias or viewpoint, when it comes to an issue or an idea. And I think the way to improve peer review, at least from my standpoint is through increased transparency. Once the reviews are actually done so for instance, perhaps, to have a two state review one that everything is blinded, so you can just look at the idea, the second you also do have to consider the credibility of the authors when people are writing things. And so you know how to strike that delicate balance between not being overly influenced by the eminence of an author or say someone who is had some theories initially that didn't really play out very well or with that some early missteps in their career. And now we're kind of coming back again. And then balancing that with the need to be able to vet your sources. I think that's tough. And I'm not quite sure where the balance is. What we don't have peer review is that what we do know about peer review is that the process of

getting something into a journal is a transparent, but not reproducible process, the in in the editorial process, after an editor gets a series of manuscripts and sends them out to the deputy editors who then send them out for peer review. When the peer review comments come back, the deputy editor will then synthesize those and make a decision as to whether or not to accept the whether or not to accept the manuscript into the journal. And so, you know, the editor deputy editors have a lot of leeway discretion in terms of what goes in and one of the questions that one should ask is, should some of the peer review comments in the process of improving the manuscript eventually be a part of the manuscript submission process or the the published manuscript. And I think, probably not. I think a comment to the editor or commentary from the peer reviewers about the value of the manuscript often would be a better way of approaching that subject. There's a lot that goes into the peer review process, but it's not just the peer review itself. It's what's done with that review. And typically peer reviews are meant in a way that are supposed to help a journal or a manuscript improve so if I was to submit a manuscript to a journal and then the journal sent me back comments. Um, I would use all of those comments to be able to improve the work that I'm doing. And hopefully sharpen my focus and so having early comments I think published alongside the manuscript is not helpful. I think having later comments or additional comments before an important manuscript goes into print that's often very useful.

Amanda Woodward: Thank you. Yeah, that's a great clarification, thinking about how transparency works alongside the need for blinding and the peer review process.

Video Three - What would improve trust in the peer review process?

Amanda Woodward: I'm curious during your time as the senior associate editor and editorial fellowship director for the journal of general internal medicine. Is there anything that you particularly did to support the work of building trust and trustworthiness in the peer review process?

Malathi Srinivasan, MD: Well, I think that you want to build trust and trustworthiness at every stage of everything that you do when you're working with the journal. I mean, part of the way that you encourage people to submit to your journal is by fostering high quality work and trying to support the research that people have done that's thoughtful and contributes meaningfully to the field. So I think the first is we would build a lot of training workshops on how to be a peer reviewer on how to be a good journal editor or a deputy editor. And I think that the more you can educate people about how to give feedback constructively and how to be a constructive citizen in the community, I think the better people do. And so, like any other cognitive skill, peer reviewing or being a journal editor, has a specific competencies that and teaching people how to be able to do that well, is something that I think any person can learn. And it's a very fun process because you get to read early work. So I would encourage everyone to review. Anytime you can and contribute to the scientific community constructively.

Amanda Woodward: Wonderful. Thank you so much for your thoughts on peer review, especially in context of thinking about trust and transparency.

Malathi Srinivasan, MD: Yeah, and I think that one thing that we haven't touched on yet, but I'm sure you're getting to also, is the idea of the preprint.

Amanda Woodward: Exactly, yes. So there has been a lot more attention paid to preprints in the COVID-19 pandemic and trying to get to information as quickly as possible and share information widely, so curious your thoughts on how preprints fit into the ecosystem of peer review and how we can make sure that they can be valuable while not spreading -information- misinformation.

Malathi Srinivasan, MD: Many years ago, I had a mentor who told me, you should never practice medicine from a conference abstract because everything is preliminary. I think the same thing is true with preprints. The preprints are a nice window into what's coming, but they shouldn't be the way we make decisions, as a society, nor should they be the way that we make decisions when it comes to patient care. You know, I think that preprints are very suggestive of where the data might lie. But again, because they haven't gone through this external vetting process where people have helped temper claims that are made, helped figure out if the analytic techniques were appropriate, helped contextualize the work that's being done. We need to be careful about how we use preprints. I love the idea of getting information out early. But I think that we need to be sophisticated in our understanding of what those early findings actually mean

Amanda Woodward: Definitely I think education and making sure people are aware of how a preprint falls into the publication life cycle is an excellent point. So thank you for your time and your thoughts on peer review, we appreciate it.

Malathi Srinivasan, MD: Thank you, Amanda. It's been my pleasure to join you today.

Amanda Woodward: Wonderful. Thank you.