Peter Hotez, MD, PhD, on physicians and students fighting anti-science rhetoric

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Featured topic and speakers

In the first of a two-part series, AMA Chief Experience Officer Todd Unger speaks with Peter Hotez, MD, PhD, dean of the National School of Tropical Medicine at Baylor College of Medicine, on how to combat anti-science movements and how physicians and medical students can join the fight.

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Speakers

- Peter Hotez, MD, PhD, dean, National School of Tropical Medicine, Baylor College of Medicine.

Transcript

Unger: Hello. This is the American Medical Association's COVID-19 update. This is part one of a two-part series with Dr. Peter Hotez, who shares how he combats anti-science movements and how other physicians and medical students can join the fight.

Dr. Hotez is the Dean of the National School of Tropical Medicine at Baylor College of Medicine in Houston and co-director of the Texas Children’s Hospital Center for Vaccine Development in Houston, Texas.
I'm Todd Unger, AMA's Chief Experience Officer in Chicago. Dr. Hotez, you were battling anti-science rhetoric long before the pandemic, but why is it so important to do right now during COVID-19?

Dr. Hotez: Well, what we're seeing is a pretty sharp rise in anti-science rhetoric and activities, and it's a bit counterintuitive, isn't it? You would think with COVID-19 sweeping across America and Americans wanting a COVID-19 vaccine, that this would be a time when anti-science movements would be in retreat, but for very odd reasons, we're starting to see it resurface and become re-energized.

Part of it is coming from a fringe group on the far right, and they've been going after me for a few years now because I'm a vaccine scientist, a pediatric vaccine scientist, and I have a daughter with autism and intellectual disabilities and I wrote a book a few years ago called "Vaccines Did Not Cause Rachel's Autism," which debunks one of the central tenants of the anti-vaccine movement, that there's a link between vaccines and autism. I explained why that's not true and how autism begins in early fetal brain development and the autism genes.

That's made me kind of public enemy number one with the anti-vaccine groups. Now, they've given me a new name. I am now the Original Gangster villain, the OG villain. So, you are interviewing the Original Gangster villain. I hope you know that today.

But then what's been happening now is the anti-vaccine groups have been aligning with other elements that are protesting against social distancing. They're protesting against masks. They're protesting against any type of contact tracing, all because they claim it's interfering with what they call their "health freedom." It's a made-up term, but it's a term that they're throwing about there. It's taken on a menacing tone lately because now you're seeing more aggressive protests and increasingly people are wearing camouflage and holding firearms when they're doing this. So, I see the next few weeks and months before the presidential election as a very unstable time with this growing anti-science sentiment.

Unger: Well, let's talk about how you combat that. You use social media a lot and other venues. What is your approach to correct misinformation, especially with groups like this?

Dr. Hotez: Well, I don't claim to have all the answers, but I wrote a paper in the Public Library of Science a few weeks back looking at the rise of anti-science. I think the paper has the title "Anti-Science in the 2020s." It's published in PLOS and PLOS Biology. One of the things that I say is, partly, this is because there's a vacuum, that we don't have enough scientists, physician scientists and even physicians speaking out against anti-science activities.

I used an example of the anti-vaccine movement. There clearly are some, and we're now starting to see pediatricians be more active in standing up to anti-vaccine groups, but I believe that there's kind of a vacuum there. We don't have sufficient numbers of these docs and of these scientists really
speaking out defending science and explaining science to the public.

Part of it is because it's not really in the DNA of medical and scientific education. Most medical students are not trained in how to talk to the public or don't receive media training. This is also true of resident physicians and fellows and even junior faculty, and there really isn't that ecosystem in place, yet the young physicians that I talk to, they're all in. They know the commitment to public service among medical students and young physicians is at an all-time high, and I think if we help to create that infrastructure, it would really flourish.

Unger: It's kind of yet another expectation that I think physicians weren't expecting. What else do you owe that kind of vacuum too? What do you need to do to get more physicians to be more vocal?

Dr. Hotez: I partly blame the culture of academic health centers. I think in many places, not at the Baylor or Texas Children's, but at some places, the Offices of Communications don't want their docs speaking out, or they do it in a very guarded way. Partly, they see their role as protecting the institution, not protecting the physician. So, they tend to be quite risk-averse and they don't want their physicians and their scientists out there expressing views on social media or writing op-ed pieces, and I think we've got to fix that culture.

The other piece we have to fix is, again, at academic health centers, young physicians who are working in academic medicine are not incentivized to do public engagement or write for the public or speak for the public. Most annual evaluation forms and physicians who are coming up for tenure or for promotion within the academic system don't receive any incentives to do that. In fact, there's usually not even a place on their self-reporting forms to even include that information.

So, it really requires fostering a whole environment to make this happen.

Unger: Yeah. That's interesting. I had another very, very public physician, Dr. Mike, who has about six million YouTube followers. When I asked him about his advice, he says, "You know, doctors are very comfortable with the data and the science, but they need to be better storytellers."

Unger: I think that's what I'm hearing from you, as well. You authored an article back in March...

Dr. Hotez: Yeah. Let me just say, I think you're absolutely right. I think that's a nice term that he uses, storytellers. It takes time to learn how to do that. It's not something that's necessarily intuitive. It is for a few, but for most, it's not. Over the years I've practiced and had the opportunity to be on TV and that sort of thing, but it's a learned craft. It's not something that's always intuitively obvious.

Unger: Well, when you think about your article that you published before about a new generation of more visible scientists and science communicators, what are your guidelines to physicians and medical students, about how to play a more active role in correcting this information?
Dr. Hotez: Well, I think one of the things you need to do right off the bat is have a conversation with your offices of communications in your academic health center, and get a sense of what the ground rules are and what's going to get you into trouble because what you don't want is to be out there and then find out you've really upset your dean or very important people at the medical center. Give them a heads up and get some guidelines to what are the boundaries, for instance.

It's different being at a state medical school, where the medical school may depend on an annual appropriation from the state legislature versus a private school, and may reflect certain donors. Get educated about that and learn to develop a working relationship with your office of communications. I think that's really important.

The other thing I would often advise is to pick your battles. I don't try to be a public intellectual about every aspect of biomedical science. I'm not out there really talking about diabetes and hypertension. I try to stay somewhat in my lane of expertise, maybe even a little broadly defined than some others might, and really focusing on infectious, parasitic, tropical diseases and vaccines. In my case, I came at it from a subject matter expert. Others managed to do it really well and do it in a broader way, and I'm always listening to them very carefully and trying to learn from them how they do it. I'm referring to individuals like Dr. Peter Attia, for instance, who I really admire. He's someone that can feel pretty comfortable getting a sort of a crash learning course in a particular area, and being able to articulate that. That's tough to do.

That's sort of an aspirational goal, but for now, I'm all about being a subject matter expert in an area and kind of staying in that area, but then also having a social conscience and knowing how to apply your knowledge to dealing with relevant issues of the day.

Unger: That concludes part one of our discussion with Dr. Peter Hotez. Thank you, Dr. Hotez, for being here today and sharing your perspective.

We'll be back tomorrow to continue this important conversation with part two of our series. In the meantime, for updated resources on COVID-19, visit ama-assn.org/COVID-19.

Thanks for joining us and take care.

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