Peter Hotez, MD, PhD, on healthy holidays, bivalent boosters, vaccine inequities & kids and COVID

AMA Update covers a range of health care topics affecting the lives of physicians, residents, medical students and patients. From private practice and health system leaders to scientists and public health officials, hear from the experts in medicine on COVID-19, monkeypox, medical education, advocacy issues, burnout, vaccines and more.

Featured topic and speakers

In today’s AMA Update, how to stay healthy during the holidays with infectious disease expert, Peter Hotez, MD, PhD—who breaks down the "septo-demic" of: coronavirus, influenza, respiratory syncytial virus (RSV), metapneumovirus (HMPV), parainfluenza viruses (HPIVs), rhinovirus and numacocle pathogens. Dr. Hotez also shares details about fighting vaccine disinformation and his new book: “The Deadly Rise of Anti-Science: How Health Freedom Propaganda Endangers the World.”

Dr. Hotez is dean of the National School of Tropical Medicine at Baylor College of Medicine and co-director of the Texas Children's Hospital Center for Vaccine Development in Houston. He and his science partner, Maria Elena Bottazzi, PhD, have been nominated for a Nobel Peace Prize. AMA Chief Experience Officer Todd Unger hosts.

Speaker

Peter Hotez, MD, PhD, dean, National School of Tropical Medicine at Baylor College of Medicine; co-director, Texas Children's Hospital Center for Vaccine Development

Transcript

Unger: Hello, and welcome to the AMA Update video and podcast. Today we're checking in with our long-time friend of the show, Dr. Peter Hotez, the dean of the National School of Tropical Medicine at Baylor College of Medicine and co-director of the Texas Children's Hospital Center for Vaccine Development.
Development in Houston. I’m Todd Unger, AMA’s chief experience officer in Chicago. Dr. Hotez, welcome back. It’s great to see you.

Dr. Hotez: It’s great to see you again, Todd. It’s been a while, but we have a lot to catch up on.

Unger: We do. In fact, we were just talking right before we started the show, we’ve been talking about this tripledemic. But you actually called it something I had not heard of before, but sounds like a lot, a septo-demic. Why don't you start off by talking about what you mean by that and how that's a more accurate description of the situation we find ourselves in right now.

Dr. Hotez: Well, septo refers to seven. So while everyone's calling it a tri-demic of RSV and influenza and COVID-19, I point out there's also parainfluenza, which is a cause of croup, as well as rhinovirus and metapneumovirus. And there's still our old bacterial friend pneumococcus that's still in play.

So they're working in different combinations and causing a lot of kids to be admitted to the hospital as well as seniors as well because senior people don't often appreciate that a lot of seniors get very sick or lose their lives from RSV, and of course pneumococcus. So this is accounting for a big surge in hospitalizations. And unfortunately, the COVID numbers are starting to go up. They're all trending in the wrong direction in the last few weeks, and so positivity is up, hospitalizations are up. And when we talk about alphabet soup, it's the most soupy of all because we have these new what I sometimes call Scrabble variants because they use letters, typically high-score Scrabble letters like B and X and Q. You have XBB and BQ1, BQ1.1. So those are now starting to accelerate. So I think we could be in for some difficult time as we head into the winter.

Unger: And especially right now, of course, we're all heading into the holiday. There's going to be probably record travel. What do you tell patients, especially those with young children, who are going to be out traveling, probably visiting older relatives?

Dr. Hotez: What I say is take as many of those pathogens off the table as you can. And so how do you do that? Well, one is getting your influenza vaccine. And remember that anyone over the age of six months can get a flu vaccine. And we've lost already 4,500 Americans to influenza, even this early, according to the Centers for Disease Control. So get your flu vaccine.

Second, it's really important that you get your new bivalent booster, the booster that has both mRNA for both the original lineage out of Central China, as well as this new BA5 subvariant. And that will actually help you with some of the Scrabble variants as well. There's some data now that suggests that it'll cross-neutralize some of the scramble variants.

So if you've not gotten boosted for the last four or five months, now's the time as you're heading into the holidays. And by the way, there's still the pneumococcal vaccine, both for seniors as well as kids. And so get up to date on that as well. There's no RSV vaccine for this season, there will be next year.
So next year when we’re having this conversation, there should be two new RSV vaccines for seniors and one for pregnant women as well. But for now, there's still a lot you can do on that front. And by the way, vaccinate your kids against COVID as well.

**Unger:** Absolutely. In fact, I was speaking with our board chair, Dr. Sandra Fryhofer, she’s our ACIP liaison, we were just reviewing the numbers, especially for kids, not the penetration rates that we’re looking for with these vaccine at this point. Do you think have people just kind of lost track here with the different kinds of boosters? Where's the disconnect?

**Dr. Hotez:** I think there were two problems in the messaging. One, we didn't adequately convey the importance for adults of getting their booster and the fact that this is a different one and will help weather those Scrabble variants better. I think that message did not get out, so the uptake in boosters is ridiculously low. I think it's under 15% nationally. But also the fact that we haven't adequately explained why COVID-19 is a problem in kids, that there have been deaths and a lot of hospitalizations in kids, and also long COVID in kids.

And we forget that by vaccinating, you reduce the likelihood of severe COVID. And while long COVID can occur after any COVID case, even asymptomatic, statistically the risk is higher if you've had severe COVID. So you can help take long COVID off the table by getting vaccinated as well.

**Unger:** Absolutely. A paper that you just recently published in "Nature," you said the emergence of new COVID variants offers us a second chance to fix vaccine inequities. What do you mean by that, and how does what we normally think of as a negative, in this case, provide a new opportunity for us to get it right this time around?

**Dr. Hotez:** Well, we've still failed to completely vaccinate the African continent. And South Asia and Southeast Asia are under-vaccinated. And now we’re having trouble persuading anybody to take a COVID vaccine. But now with these new Scrabble variants emerging, now having a bivalent vaccine in hand reminds people of the importance of getting the booster. And maybe this time around we can get it right. We gave mRNA vaccines too little, too late to the world's low- and middle-income countries because of all the vaccine hoarding by North American and European countries.

We're also now making the bivalent version of our vaccine. So our COVID vaccine technology we developed at Texas Children's Hospital and Baylor College of Medicine, Todd, have now reached 100 million doses, which is pretty extraordinary. 100 million doses of our vaccine have gone into kids and adults in India and Indonesia.

But now we're making the bivalent version of that as well. And I think we're moving pretty quickly, and hopefully we can boost the world with that vaccine. So that's the next big project.
Unger: Just a huge shout out to you and your partner for the development of the vaccine. That’s quite a milestone for which you were nominated for a Nobel Prize. That’s just amazing work. Anything that you’re learning from how those efforts have gone and what you want to see down the road?

Dr. Hotez: Well, I think we never really got the support we needed from the global policymakers. And the thinking was, well, only the big pharma companies, the multinationals, have the chops to do big things. And now I think we’ve provided a proof of concept that no, that a research Institute here in Texas, ours, our Texas Children’s Hospital Center for Vaccine Development, with vaccine producers in low- and middle-income countries, can do big things.

And so it’s not that the pharma companies are bad guys, they provide a lot of vaccines for the world. But the point is we need to broaden the vaccine ecosystem and start bringing in organizations like ours and vaccine producers in low- and middle-income countries, because that has the effect of decolonizing the system. It makes it less dependent on multinational companies based in Europe and North America, and then waiting for the crumbs to filter down to low- and middle-income countries. That doesn’t work anymore, and now we have an alternative pathway for doing that.

So I'm hoping, now that we've been able to show that we can get 100 million doses administered, that we'll now for this next booster, this bivalent booster, people will take a little more seriously, and for future pandemics as well.

Unger: One of the things that we've talked about over the last two years has been kind of this rise in anti-science aggression. And so I'm very pleased to find out about a new book that you have coming out soon, "The Deadly Rise of Anti-Science: How Health Freedom Propaganda Endangers the World." That's an interesting choice of words, that concept of health freedom propaganda. Tell us more about it and what you hope people, and specifically doctors, will take away from it.

Dr. Hotez: Well, it reflects in the United States the fact that 200,000 Americans during the Delta COVID wave alone, needlessly lost their lives because they refused a COVID vaccine even after vaccines became widely and freely available. And they did it out of allegiance to ideology on the far right that was amplified on some of the conservative news outlets rallying around this kind of phony baloney banner of health freedom or medical freedom. And people lost their lives.

And so the point is when you talk about these anti-vaccine groups is no longer a theoretical discussion. 200,000 Americans, including 40,000 Americans here in Texas, needlessly lost their lives. This, as a societal force, it's killing as many or more Americans than things like gun violence or terrorism or road traffic accidents, all of the things we try to build a lot of infrastructure to prevent. But we don't frame it that way.

So the anti-vaccine aggression, anti-science aggression is a killer, and we've got to start taking it seriously. And so the book really does a deep dive and explains how the anti-vaccine movement
evolved or devolved from false assertions around claiming that vaccines cause autism. That's how I got involved, because I have a daughter with autism and wrote a book. "Vaccines Did Not Cause Rachel's Autism." I was hoping that was the end of it.

But now the anti-vaccine movement has progressed to become a political movement rallying around health freedom, especially in some of our Southern states, and particularly here in Texas. And as I say, it's now become a potent killing force and it's expanding globally, Todd. Now you're starting to see that same health freedom, medical freedom rhetoric in low- and middle-income countries on the African continent and South Asia. So I worry now about spillover to all pediatric vaccines and childhood vaccinations. So I think the whole vaccine ecosystem is in jeopardy because of this.

Unger: So given that, what we're seeing here and what you're covering in your book, how do you, physicians, specifically, how can they be part of the solution to what we're facing now?

Dr. Hotez: Well, I think what you're hearing from physicians and health care providers is a lot of feelings of futility or frustration because in the past, they've been able to convince their patients to get vaccinated and now many of them are dug in. And they're dug in, as the book points out, because of political ideology. And so you still try to provide all the medical reasons why they should get a vaccination, but increasingly, that's not working because out of allegiance they have to this aspect of politics in the United States.

And so I think one of the things I say to health care providers, if you're feeling frustrated, you have good reason to feel frustrated. And it's not you. It's, we've got to work with our elected leaders and our political systems to uncouple anti-vaccine, anti-science aggression from the far right.

What I say is, look, everyone's entitled to their conservative views, even extreme conservative views but don't adopt this one. Somehow we have to find a way to de-link it and get it off of the cable news channels and the far right podcasters, and get Americans to really looking after their health and getting their vaccines and other interventions.

Unger: Well, Dr. Hotez, thank you again for all you're doing to fight misinformation, to bring that subject of anti-science aggression to the fore. We really appreciate a chance to speak with you today. Always a pleasure. We'll be back soon with another episode. In the meantime, you can find all our videos and podcasts at ama-assn.org/podcasts. Thanks for joining us today, and please take care.

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