Dr. Peter Hotez

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Marianne O'Hare: Welcome to Conversations on Health Care with Mark Masselli and Margaret Flinter, a show where we speak to the top thought leaders in health innovation, health policy, care delivery, and the great minds who are shaping the healthcare of the future.

This week Mark and Margaret speak with Dr. Peter Hotez, vaccine scientist, pediatrician and founding dean of the National School of Tropical Medicine at Baylor College of Medicine in Texas. Dr. Hotez addresses the deadly consequences of a lack of a national public health strategy to tackle COVID-19 in the US, the rapid acceleration of vaccine discovery for this particular Coronavirus strain, and the threat of vaccine hesitancy and distribution timeline moving forward.

Lori Robertson also checks in, the Managing Editor of FactCheck.org looks at misstatements spoken about health policy in the public domain, separating the fake from the facts. We end with a bright idea that's improving health and well being in everyday lives.

If you have comments, please e-mail us at chcradio@chc1.com or find us on Facebook, Twitter, or wherever you listen to podcast. You can also hear us by asking Alexa to play the program. Now stay tuned for our interview with Dr. Peter Hotez here on Conversations on Health Care.

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Mark Masselli: We are speaking today with Dr. Peter Hotez, founding dean of the National School of Tropical Medicine and Professor of Pediatrics at the Baylor College of Medicine. He's the Director of the Texas Children's Hospital Center for vaccine development. He served as US Science Envoy to the Middle East in North Africa under President Obama and was President of the Sabin Vaccine Institute.

Margaret Flinter: Dr. Hotez is author of more than 400 published papers and several books including the newly released Preventing the Next Pandemic: Vaccine Diplomacy in a Time of Anti-science, and Vaccines Did Not Cause Rachel's Autism. Dr. Hotez is a member of the National Academy of Medicine, the National Institute of Health Council of Councils, and he's also a fellow of the American Academy of Pediatrics. Dr. Hotez, we welcome you to Conversations on Health Care.

Dr. Peter Hotez: Many thanks for having me.

Mark Masselli: Well, thanks so much again, and you know you warned us many months ago that things could get out of hand in the absence of a

national strategy. While there's been promising news about the vaccine in recent days, I think it's fair to say your worst projections are coming to pass infections and hospitalizations are skyrocketing, along with the death toll. As someone who's on the front line of this pandemic and major hotspot in Texas, I wonder if you can help our listeners understand what we're facing here in America around the pandemics trajectory, as we are heading into Hanukkah Christmas and the New Year.

Dr. Peter Hotez: Yeah, well, thanks. In this transition time, I had warned that things could really get out of hand, because even when we had a functioning White House, there was no real national control program and it was left to the States. Now it seems like everything is evaporated, we're just seeing this very steep acceleration, getting 200,000 cases per day. Remember what that number means, it means it's usually an underestimate times four or five. So we're upwards to a million cases a day. This is starting to overwhelm intensive care units across many parts of the country. That's when the deaths really skyrocket, is when you start overwhelming health systems and piling people into ICUs on top of exhausted nurses and doctors and hospital staffs. And so in some ways, it really is a nightmare scenario, some of the worst affected areas in the world are in the United States and for most of this fall, it's been the North Central US and Texas, but now it's spreading outward.

Now Rhode Island is getting hit very, very hard, and we're hearing news reports of what's going on in Rhode Island. Indiana's getting hit very hard, so it's pretty much now going to be a full-on national problem. It was kind of confined in the middle mostly red states of people defiant of mass and social distancing but it looks like it's just all over the US and we'll hit 300,000 deaths probably next week and probably 400,000 deaths by the inauguration, which is a terrible number, the number of American GIs who lost their lives in World War Two. And, and it'll keep going for a while until, since without a national strategy the approach now is to be relying 100% on biotechnology solutions, meaning vaccines pretty much and that's where we're at. So until we can start vaccinating the population this awful trend will continue. I tried to hold it off. I tried to work with the White House over the summer to halt this fall surge because I knew how horrible it would be, I just couldn't get any traction there.

Margaret Flinter: Dr. Hotez, it is obviously very sobering analysis, it speaks to the challenges wrought by the lack of a national strategy. Here we are, you say we need to brace for some very traumatic days ahead of us, but you've also said that there are three things we have to do right now, to at least try and curtail the outbreak until the vaccine becomes widely available. So share what are those three things that you think we just need to do right now to try and at least make a dent in this?

Dr. Peter Hotez: Well, to try to incentivize people, what I like to say is there is a reason for doing this, if we can keep everybody alive for the next few weeks, get them to the other side, and get them vaccinated, nobody has to lose their life, and things will not be back to normal, but it will be in a much better place in a few months. This is especially tragic to lose the lives of loved ones during, over this period. The message is one facemasks of course, and we've heard the President-elect Biden recommend 100 day wearing of masks and clearly if we get too close to 100% mask wearing that can make the difference of whether 300,000 or 400,000 or 500,000 Americans have lost their lives by the time of the inauguration, so that's really important.

I think the other is implementing aggressive social distancing in areas where we're starting to see surges in our ICUs are demonstrated by positivity rates and hospital admissions and other measures. More or less that's what the governor of California, Gavin Newsom's recommending is he's going to do surgical strikes in areas where there are these deep surges and I wish other parts of the country would adopt that. It's not the same as a national control program, but at least it gives our healthcare providers our heroes a chance to recover and be able to manage patients to the best they can. Then of course, continued diagnostic testing is still a cornerstone, I'm not sure how effective contact tracing is at this point. It's just such a high level of transmission. These are all stopgap measures, but at least it'll help limit loss of life to some extent, until we can really roll out vaccinations in a more substantive way.

Mark Masselli: You know, I want to pull thread a little on vaccine development. You've been involved in that your whole career and it's often very long and arduous process. But I think you rightly noted that the road to COVID 19 vaccine has been happening over 17 years since the SARS outbreak. I wonder if you could talk to our listeners about the most recent sprint and the incredible rapid mobilization that's come about over this last year. But also, what should we keep our eye out in terms of data? It appears we know about the efficacy of the vaccine, but we don't know a lot about its effectiveness until it gets wider distribution to the general population. What are you keeping an eye on in terms of the data to give you some indication about its effectiveness or any issues that might arise?

Dr. Peter Hotez: Well, you are right. I think, these vaccines we often, it's pretty much everything we know about these vaccines, unfortunately it is coming from company press releases, as I often like to point out. When a CEO releases a press release from a company it's not written for you, it's not written for me, it's written for the shareholders and sometimes it's accurate but sometimes it's not. Fortunately, I think the new latest ones from Pfizer and Moderna are roughly reflective of what the FDA is actually before them when they're making decisions about

emergency use authorization.

I think, if you look at the big landscape we'll have four or five hopefully vaccines by the spring and that's going to be important because I don't think we're going to be able to vaccinate a significant percentage of the US population with just with the two mRNA vaccines alone. I'm not uncertain that the technology is going to be robust enough, at least this, for this pandemic, it'll definitely improve over time but I wouldn't want to rely totally on mRNA vaccines at this point, even if in the early stages they look effective. So what I'm looking at in the coming months is multiple vaccines, at least the two mRNA vaccines probably to add no virus based vaccines from AstraZeneca Oxford and J&J, maybe a particle of vaccine from Novavax.

We're accelerating a vaccine now being scaled up across India and tested, so that's very exciting. It's an older technology it is a recombinant protein approach, they all work more or less by inducing what are called virus-neutralizing antibodies. That's what our work over the last 17 years more or less showed, if you can induce high levels of virus-neutralizing antibody you get spike protein of the virus, you'll get vaccine protection. So the key is to for everybody to get virus-neutralizing antibodies in their system and don't overthink which vaccine you're going to take, though they all do that. What we don't know is what the durability of protection is, how long will they protect, will it be three months, 3 years, 30 years, and also whether the same safety spectrum that we've seen in 30,000 40,000 person clinical trials will continue to hold as we start vaccinating tens of millions of people. But there is a good safety monitoring system in place.

The hope is, as we move into the early spring, we will start vaccinating a significant percentage of the population. It will keep you out of the hospital and the ICU and then if enough people get vaccinated in the country, we estimate now with a group at City University in New York 60% to 80% of the US population. Potentially we could achieve interruption to the transmission as well, which would be fantastic, but a lot of the stars will have to align. In order to achieve that we will need to have vaccines that stop asymptomatic transmission and we don't know that yet from the performance spectrum of what we've seen in the phase three trials. Hopefully we'll get an understanding of that, we'll probably need adolescence and kids vaccinated. In order to do that we'll need a communication strategy to manage all the speed bumps, all the bumps in the road because every day you're going to be hearing something whether it's Bell's Palsy from the Pfizer vaccine, or we heard about two allergic reactions in two people in the UK that's got to be the message that we don't have a robust system of communication in place to manage that.

We're hearing everything from the pharma CEOs, who more often bungle the message and then we have to counter the anti vaccine lobby. So far just no one has shown any appetite for doing that. So we still have a lot of work to do to get to that second piece of interrupting transmission with widespread vaccination.

Margaret Flinter: Well, Dr. Hotez, one of the stars that has to align as you've indicated, is trying to hold down the tide of vaccine hesitancy. Certainly, you know that very well as a vaccine scientist, a pediatrician, and I know a self described autism dad, which led you to perhaps write your book Vaccines Did Not Cause Rachel's Autism. We have seen this around measles in particular but also some other vaccines and yet the entire world does not have this shared experience in recent memory for anybody dealing with a pandemic like this. What's your best sense of, will this be different, will people be more willing to accept the vaccine against COVID because they've had this lived experience of seeing such widespread death in their communities and in the country? Is there a key message for people to be getting now to try and blunt some of that vaccine hesitancy?

Dr. Peter Hotez: Well, it depends which day you ask me. There are some days when I am quite optimistic, we'll be able to overcome it, other days I'm not, and that really does reflect some nuance of the new cycle. Most of the surveys that we have are collected data prior to having the efficacy results, knowing that we may have vaccines that are 95% protective. I think, the numbers showing up to half of Americans will refuse COVID-19 vaccines, even if they're made available,. I think that number will shrink, as the efficacy numbers are confirmed by the FDA, as we already have done for Pfizer with the emergency use authorization. As people see their colleagues and friends and family get vaccinated with no untoward effect, I think the acceptance level will increase.

Working against us is the fact that there will be these bumps in the road where we hear about allergic reactions or Bell's Palsy and without an appropriate level of government scientists communication to the American people that will be amplified. It will be amplified by the media and of course amplified by the anti vaccine people. So you know after what's happened today, I'm less optimistic than I was yesterday, just on the basis because every adverse reaction that happens is being put out there without any kind of effort to contextualize it. I do the best I can as a medical school professor talking on the cable news networks, but I don't have the accountability. I'm not a government scientist, so that's a problem and of course we've got this unfiltered, very aggressive anti vaccine movement that dominates the internet. So hard to know how all this is going to play out.

Mark Masselli: We're speaking today with Dr. Peter Hotez, founding dean of the National School of Tropical Medicine at the Baylor College of Medicine. Dr. Hotez in your new book, Preventing The Next Pandemic, you note that we should already be preparing for the next wave of deadly pathogens that are certainly to emerge. It seems like maybe every 10 years we've had SARS and MERS then we have COVID-19. Some nations have effectively thwarted bad outcomes with the pandemic largely through effective public health strategies. Obviously, the United States has not. How do we move beyond this instructive moment to better prepare policymakers and global health practitioners for the next pandemic? Tell us more about your call for vaccine diplomacy in this time of anti science to address this and really future challenges?

Dr. Peter Hotez: Yeah, within the US, I think this concept of a Coronavirus Task Force, if nothing else, we've learned as a discredited concept. It's too politicized. You can't manage a pandemic or an epidemic out of Washington DC. I have an article that's been published now in Microbes and Infection and it basically says it's got to be taken out of Washington. It's got to move to Atlanta, it's got to be put firmly in control by the Centers for Disease Control. They're the professional set up to do that and if there have been lapses this year because they did miss the entry of the virus from Europe into New York and the debacle with the testing. There are some instructional issues that have to be fixed. But that needs to be prioritized and running out of Atlanta and not Washington. I think that will help quite a bit and really create a national response and stop this nonsense of, hey, we just have to let the states be in the lead and with some backup, FEMA support and supply chain management, that that's a failed strategy.

Globally we have a lot of repairing work to do. The US has pulled out of the World Health Organization and the COVAX sharing facility for equity around COVID-19 vaccines. We have the President's executive order this week saying it's America First, which has no teeth to it anyway, because the contracts are already signed by the multinational companies. We're going to have to fix that because right now in that gap, you have now the Russians and the Chinese making, bypassing usual vaccine governance mechanisms with WHO and negotiating one on one bilaterally with the country. So it's got this kind of cold war smell to it, working with the Latin American countries and African countries for influence. So there's a lot of damage that has to be undone. It's all doable, but we're going to have to be a different type of country, really taking on control of our own epidemic and providing better leadership globally.

Margaret Flinter: But Dr. Hotez, you introduced me to a new acronym NTDs, for Neglected Tropical Diseases. It is something that you've put a lot of very important focus on and seen just so much suffering and harm

come from a variety of preventable illnesses that have impacted some of the world's most marginalized and vulnerable populations. I know you have a deep concern for health inequities here in the United States and certainly during this pandemic, we've had the concerns about disproportionate impact, higher death tolls in certain populations. There are questions of whether some of the most privileged COVID victims are getting access to better or earlier treatments, while others may not. What are your thoughts on how we move forward from here beyond COVID to address these systemic disparities in healthcare and outcomes in our own population here at home?

Dr. Peter Hotez: Well, it's no secret that the US is one of the leaders in health disparities unfortunately. We have one of the world's most expensive health systems and yet the one of the worst in terms of inequities and inefficiencies. So there's that larger structural issue. I think, we haven't done enough to recognize the impact of COVID-19 on low-income neighborhoods, and particularly the essential workers that comprise the Hispanic African-American, Native American communities, even basic stuff, with guidelines, saying 65 and older that was based on non-Hispanic whites with only 13% were under the age of 65. But it's 35% among the Hispanic community. It's men and women in their 50s and early 60s. Even simple things that don't cost as much more, we can fix to save lives, and yet, we just can't seem to keep all this on the radar screen.

I testified to the Congressional Hispanic Caucus over the summer and basically made that statement that we're experiencing historic decimation of Hispanic communities. Here in Houston, we get a death report from the people who've died the day before, the week before and, every day, it doesn't provide names it provides age, race, ethnicity, and sex, and it's every day Hispanic, Hispanic, Hispanic, Hispanic going down the list, and this more or less goes on without comment. It's not just Houston, it's across the southern cities and up into Chicago and places like that, that have large Hispanic communities. This is largely unknown. We're going to have to finally address this. I know the Biden Administration has appointed someone to manage racial inequalities on the Coronavirus Task Force, and I hope that we can elevate that kind of thing to greater importance.

Mark Masselli: We hope so as well, and our thoughts are with all those who've lost their lives, and certainly, the black indigenous people of color have been significantly impacted by the U.S. bungling of our response to the pandemic. But we have to figure out a strategy moving forward and we will shortly have a new administration, and President Elect Biden has set some ambitious goals. You mentioned 100 days of wearing mask and also this effort to vaccinate 50 million Americans in his first 100 days that's given that two are needed for each individual.

I guess I ask the question, is this possible? I ask that in part because the current administration hasn't developed a delivery system, the supply chains in disarray. Everything has been left, as you said earlier to 50 states. It's terrible strategy. What keeps you up at night, to get all people in America vaccinated, to really implement this very important goal that the President Elect has laid out?

Dr. Peter Hotez: Well, I do think it is doable. Remember, every year we do a carefully orchestrated dance of vaccinating 85 million Americans against the flu, and that starts around August and goes to the end of the year. Now, it's fewer people over a longer period of time, but it's not – in terms of scope and magnitude, it's not that much different. I mean, it is more ambitious and you have the problem, the fact that the first vaccines coming out have these onerous freezer requirements that make it more challenging, but it's certainly doable.

I think, though, we're going to have to fix our deficits and communicating about vaccines, we just don't have good mechanisms for it. I know there's a plan to pay $50 million for public service announcements, and that'll help but it's not enough, we're going to need government scientists on the lead. And then we have to do one other thing, which no one right now has an appetite for, and that is launch a counter offensive against the anti-vaccine groups that are deliberately targeting African-American communities. Especially in academia that makes people very uncomfortable or in governments to do something like that, but treat it like we would terrorist organizations. I mean, actually it's killing a lot more Americans than terrorist groups ever have.

So for that, I've recommended now creating an Interagency Task Force to look at what are our levers that we have to do this. In the past, we've left it to the Health and Human Services agencies that don't want to get involved. They've not seen the urgency of doing this. I think it means bringing in Homeland Security it means bringing in the State Department because a lot of it's coming from Russia and Russian bots and trolls, it means department of commerce. If we put our mind to it, we can put – and our political will to it, we can do a lot, and that's going to be necessary as well.

Margaret Flinter: We have been speaking with Dr. Peter Hotez, the Founding Dean of the National School of Tropical Medicine, and the Director of the Texas Children's Hospital Center for Vaccine Development. Learn more about his work by going to www.peterhotez.org, or follow him on twitter @PeterHotez or @TexasChildren's. Dr. Hotez, we want to thank you so much for your dedication to advancing the science of vaccines, for your dedication to global health inequities, for your thought leadership during this pandemic, and for being such a steady and compassionate voice of reason and information throughout these

many very difficult months. Thank you for joining us today on Conversations on Health Care.

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Mark Masselli: At Conversations on Health Care, we want our audience to be truly in the know when it comes to the facts about healthcare reform and policy. Lori Robertson is an award winning journalist and Managing Editor of FactCheck.org, a nonpartisan, nonprofit consumer advocate for voters that aim to reduce the level of deception in U.S. politics. Lori, what have you got for us this week?

Lori Robertson: A recent study in Denmark found that facemasks did not have a large protective effect for wearers. It did not find that masks provide no protection at all or don't offer benefits to others, which is how some wrongly interpreted the results. The Randomized Controlled Trial evaluated whether giving free surgical masks to volunteers and recommending their use safeguarded wearers from infection with the Coronavirus in addition to other public health recommendations. The study didn't identify a statistically significant protective effect for wearers, but the trial was only designed to detect a large effect of 50% or more, and the study didn't weigh in on the ability of mask to prevent spread of the virus from wearers to others, which is thought to be the primary way that masks work.

As a result, the most that can be said is that this particular study under the conditions at the time in Denmark didn't find that the facemask intervention had eight large protective effects for wearers. Social media posts nevertheless latched on to the study to wrongly claim that the trial, “Proves masks offer no protection from COVID.” Or that masks, “Don't work.” Again, the study published in November only assessed the personal protective effect of a mask intervention, not the potential for masks to hamper spread of the virus to others. Around 6,000 people who left their homes for at least three hours a day participated, with approximately half being given a box of 50 surgical masks and being told to wear a mask whenever outside of their homes.

The other half was not given masks or such a mask recommendation. The study was conducted at a time when Danish authorities were not recommending masks to the general public. So most people those groups would encounter were not likely to be masked. After a month 1.8% of the people in the mask group had been infected with COVID-19 compared with 2.1% in the control group, the difference was not statistically significant. That's my FactCheck for this week. I'm Lori Robertson, Managing Editor of FactCheck.org.

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Margaret Flinter: FactCheck.org is committed to factual accuracy from the country's major political players and is a project of the Annenberg Public Policy Center at the University of Pennsylvania. If you have a fact that you'd like check, email us at www.chcradio.com. We'll have FactCheck.org's Lori Robertson check it out for you here on Conversations on Health Care.

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Margaret Flinter: Each week Conversation highlights a bright idea about how to make wellness a part of our communities and everyday lives.

Mark Masselli: When Jennifer Staple-Clark was a sophomore at Yale and internship at the ophthalmology office turned out to be a life transforming experience, she realized that many of the patients who had limited access to medical care were coming into the office with serious eye conditions that had gone past the point of reversing, leading to unnecessary blindness. What she launched from her dorm room 11 years ago, was a local initiative to improve access to preventive eye care to the neediest population in her local community. Her vision quickly grew. Within two years, she took her organization Unite For Sight worldwide, and has since turned it into one of the leading providers of global eye care in hundreds of communities around the world.

Unite For Sight brings social entrepreneurs, public health experts, local eye surgeons, and volunteers together to bring eye care into some of the most underserved areas of the world. The motto at Unite For Sight is that local problems need local solutions, so they use each country's existing pool of ophthalmologists and eye surgeons to treat their local patients. They also train community health workers in each area they serve thus removing traditional barriers to eye care experienced by many in extreme poverty, and also ensuring a continuum of care for all of the patients they serve. The community health workers provide education and transportation to get doctors to the patient's communities and patients to the hospital if surgery is indicated. Since its inception, Unite For Sight has served 1.4 million patients worldwide and restored eyesight to roughly 55,000 people, restoring not only their sight, but their dignity and ability to be productive members of their communities as well, identifying a pressing medical need, using global health delivery models and improving the quality of life by offering basic preventative eye care to those who had previously gone without. Now that's a bright idea.

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Marianne O'Hare: You've been listening to Conversations on Health Care.

Mark Masselli: I'm Mark Masselli.

Margaret Flinter: And I'm Margaret Flinter.

Mark Masselli: Peace and Health.

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Marianne O'Hare: Conversations on Health Care is recorded at WESU at Wesleyan University, streaming live at www.chcradio.com, iTunes, or wherever you listen to podcasts. If you have comments, please email us at www.chcradio@chc1.com or find us on Facebook or Twitter. We love hearing from you. This show is brought to you by the Community Health Center.

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