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- Female: Welcome to Conversations on Health Care with Mark Maselli 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. Eric Feigle-Ding, Epidemiologists and Senior Fellow at the Federation of American Scientists, a global policy think tank dedicated to using science and scientific analysis to make the world more secure. A long time Harvard Researcher and Professor he has established a significant presence on Twitter, monitoring COVID-19 data trends and addressing COVID-19 misinformation, around disease spread, new variants and vaccines.
- Lori Robertson also checks in, 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 email us at CHCRadio@chc1.com or find us on Facebook, Twitter, or wherever you listen to podcasts. And you can also hear us by asking Alexa to play the program. Now stay tuned for our interview with Dr. Eric Feigle-Ding here on Conversations on Health Care.
- Mark Masselli: We're speaking today with Dr. Eric Feigle-Ding, Epidemiologist, Health Economist and Senior Fellow at the Federation of American Scientists a global policy think tank, dedicated to using science and scientific analysis to make the world more secure. He established a significant presence on Twitter to monitor COVID-19 data trends and to address COVID-19 misinformation.
- Margaret Flinter: Dr. Feigle-Ding established the first geo-social network public alert system for toxic drinking water in the country. He has published numerous papers and several books including Poison Pills: The Untold Story of the Vioxx Drug Scandal. He served for 16 years as Professor and Researcher at Harvard Medical School and the Harvard T.H. Chan School of Public Health until last year. And he was one of the first scientists in the United States to issue a dire warning about the coming pandemic. Dr. Feigle-Ding, we welcome you. And thank you for joining us on Conversations on Health Care.
- Dr. Eric Feigle-Ding: Thank you, very happy to be here.
- Mark Masselli: And Eric, I want to pull the thread on what Margaret just said that you were early scientist to identify that this coming pandemic was going to be very deadly, highly transmissible. How did you identify it so early? What was the datasets that you were seeing? Take us back a year ago, what was the data feed that you looked at to make this

analysis?

Dr. Eric Feigle-Ding: Right, there was a very turbulent time. In January 2020, nobody was certain about anything. The only certainty was the uncertainty and the crazy rollercoaster of information. And so there was a lot of noise, and I have relatives in China. So normally, when there is chatter on Chinese social media, it follows a pattern in which often times, the Government is very aggressive about censoring something, if they really don't like it. But when something is chaotic, and they're not censoring it fully, it means that there is something real going on. And politically, they don't know what to make of it. So which means that the signals of all these testimonies of people dying, hospitals being flooded, they're real. And I think that the ear to the ground plus when we saw the preprints coming out. The question is you can't shout at the rooftop with just internet rumors. So when the preprints came out, and there was a showing that (inaudible 00:03:32) which is quite large, and later on, it was confirmed to be 3.8. We knew that this is real. And so we had to prepare.

But in certain ways, I think academia traditionally is very conservative. It doesn't want to declare something is causal or something is true until irrefutable mountain body of evidence is there. But in terms of pandemic action and awareness, every single day matters and every single moment in which you take an earlier action, you could actually curb the epidemic.

So there is a preponderance of anecdotal data, there is now study supporting it. And though we may not be absolutely sure about everything, the signal is now jumping out. And I decided to declare, the Holy Mother of God, it's going to be a thermonuclear level pandemic, because I saw the stories and anecdotes coming out of China, were not isolated, it was quite a preponderance.

Margaret Flinter: Well, Eric, obviously we know so much more now about how the virus is transmitted, how it makes people sick, kill some people, spreads through entire communities. And it's very painful to look back and see how that information as it was evolving was denied or even vilified. It must have been unbelievably frustrating. And I am curious to what extent do you feel like you were able to get the message out there, organize people, get people taking action, even if it wasn't happening at the national level.

Dr. Eric Feigle-Ding: And last year was so frustrating because the lack of federal leadership in United States clearly contributed to the lack of early action, in terms of lockdowns, in terms of testing, in terms of PPE organization, and now we are also seeing it play out in vaccine rollout. I didn't realize until later, but there were people who heard, there were people who in Australia, New Zealand, who said they heard it in Asia because back then it was originally Asia, who was reacting the fastest.

And also the Maryland Governor his office directly reached out later that summer and said, "Your message was heard loud and clear." Maryland was one of the states that ordered PPE and testing around, as they the circumvented the White House, to do it.

So I think, hopefully, it was heard by more people, the preponderance of data, preponderance of concern. And in terms of me shouting, it's not that effective compared to WHO, to declare a Public Health Emergency International Concern. They soon did. And then in terms of declaring a pandemic, they didn't do until March, I think, mid-March. But in terms of declaring these kinds of emergencies, it was such a critical thing because countries have to prepare. And you also need to literally take a wartime mobilization. But I think people need to keyed what basically Dr. Mike Ryan said that "Perfection is the enemy of the good", especially in a pandemic response.

Mark Masselli:

You know I do want to pick up on your statement earlier that there was a lack of leadership on so many levels right, here in the United States, on testing. PPE, on vaccine rollout and the like. And I want to sort of connect it to the really impressive work you've done on social media. We have about 400,000 followers today, talk about the role of social media has played during the evolving pandemic and sharing information. That's not always spot on, but it's very relevant. I want to connect that to your assessment of the leadership we now have in place, right, because as Dr. Fauci has said, he's been liberated, right, in terms of speaking out.

So sort of connect the work you did on social media when there was that vacuum and how do you assess the leadership? And then what's the continued role in social media?

Dr. Eric Feigle-Ding:

Right, I think social media plays more and more of a role as we know. It can also be a source of great misinformation. Like Hydroxychloroquine, I do not know how that blew up, but clearly the science was not there. And we did lots of randomized trials, yet it kept perpetuating. And I was one of the first trying to push back against Hydroxychloroquine. And I was attacked by Right wing mob in terms of advocating against it, because there was no evidence for that. And then there is also other things.

I think social media shows that misinformation can lead to dangerous outcomes, not just the false beliefs that masks don't work, the false beliefs and the natural herd immunity, which is incredibly dangerous and there's dangerous movies like the Plandemic conspiracy movie. And then now of course, the riots, the Insurrection Riots on January 6, against the Capitol. A lot of that was fomented by leaders and dark social media groups.

And so we know that what happens in social media, the

conversations spill over in real life, which makes it even more critical we fight against that. And we did an analysis at FAS, and we analyzed that the 'Scott Atlas' herd immunity whenever he was talking about herd immunity, half of all pro-natural herd immunity was actually done by bots. We actually have shown that because these bots were retweeting and tweeting faster than humanly possible.

And, I was one of those who were the leading advocates fighting against it. We know that fighting against misinformation is so key. I really felt for Dr. Fauci, he couldn't speak up as vocally as he wanted to you know, he admitted that. But I'm really glad he is able to now.

And so hopefully social media, we can take a step back. But we know that even if Trump isn't on Twitter, we know that it is literally a living engine that can fuel things in the real world. And people not wearing masks, mask denialism is just clearly one clear product that has led to the pandemic being much worse than it could be.

Margaret Flinter: Well, Eric, you're a senior fellow at the Federation of American Scientists, which is the global think tank that started way back in 1945 by the scientists who worked on the Manhattan Project, which developed the nuclear bomb in a very positive way. We have our own in that Manhattan Project now, which has been the race to develop the COVID-19 vaccine and we are so happy to see them now coming into our communities and into our states to do the work that only they can do.

But we want to ask you who've lived through this entire year what do you say now to people who still question safety and efficacy of the vaccines. In layman's terms, how do you communicate to people, the safety and the efficacy when there is still so much misinformation as we talked about a moment ago, coming out.

Dr. Eric Feigle-Ding: Yeah, I think it's understandable that people are concerned about vaccine given how much again, the misinformation and confusing information that they heard. And also that previously vaccines always took many more years than it took this year in which we arrived with vaccine in 10 months. But I want to emphasize first of all, we haven't seen a pandemic like this in over 100 years. The technology has gotten incredibly, incredibly better. We're able to synthesize new vaccines in as little as six weeks before entering the testing. And of course, the funding out there is just incredible, it is an unprecedented amount of funding billions, tens of billions of dollars, that normally, we would have ever seen medical research for one disease.

So I think that people have to realize, and also, we're finding the efficacy results faster. Unfortunately, because infections are so rapid and high often times, these trials take over a year, because there's not that many infections. But with the pandemic raging, we can get

results and efficacy and safety results much faster. And I think people also don't understand that the concept of vaccine versus a placebo is that if you see, say, 5% of people having an adverse event, but you see it in both the placebo and the vaccine, that means it's not related to the vaccine.

And I think people have trouble understanding that because we've done an analysis that if you vaccinate 10 million people within two months, you're going to see about 4000 heart attacks, 4000 strokes, and thousands of cancers and about 10,000 deaths, especially if you start immunizing the elderly. And so we have to realize there will be a lot of stories, anecdotes of people who got the vaccination and die. But we know from the data that there is a natural rate of death, and the vaccine is definitely safe for all these severe outcomes. But what the vaccine is good for is preventing the infection which you have, again 95% divergence with the two mRNA vaccines.

Now that people are getting more versed in all this and this is what the importance of science education and social media education is because you can hear one thing on a news, but oftentimes you're not able to ask further questions. But if you engage on social media, and explain, in a very understandable way as not just medical journals I think it builds trust. And I think social media can be used for a power for good to build trust in vaccines.

Mark Masselli: We're speaking today with Dr. Eric Feigle-Ding, Epidemiologist, Senior Fellow at the Federation of American Scientists, a global think tank dedicated to using science and scientific analysis, to make the world more secure. He was a professor and researcher at Harvard.

Eric, I want to go back to your prescient year ago. And right now we have the variants that are out there. And I guess, this is not a medical term, they're scaring the heebie-jeebies out of many people, because the more we hear the less we know.

On one hand, you have the UK variant, which at some point sounded like it was the vaccine could manage it. And then you're hearing that the South African variant might be a little more challenging. But still manageable by the vaccine, but at the same time, Moderna says, "Oh, by the way, we're already starting to develop a booster shot" which probably doesn't leave a lot of comfort in people's minds.

Can you clear up some of the mystery around the variants, just how people should be thinking about it? And what are some good sources of information and the reality is we may see more mutations, particularly as we haven't vaccinated enough people to prevent this virus from mutating.

Dr. Eric Feigle-Ding: Right. So the UK variant also known as B. 1.1.7, was identified, I would

say, actually, because UK does a lot of sequencing. And one of the things we learned early on, “no testing no pandemic”. In here it's also similar “No sequencing, no mutations”, and UK found it early, but we quickly found additional variants in South Africa, in Brazil.

South Africa and Brazil one have a special mutation that seems to evade the antibodies from previous convalescent patients, as well as the vaccine. Although I would say that evasion of a vaccine antibodies is actually weaker than the evasion of convalescence, because we know that the vaccine is stronger, provides a stronger immunity than those with previous infection, which is a good thing and a reason to take the vaccine.

The vaccine provides, especially the mRNA ones, provide 95%. If you see a small drop, I would just say it's probably 5%, 10%, 15% drop max. And just for perspective, before we have any vaccine, we were just hoping and praying. We would have one vaccine of 50%. The fact that we ended up with a 95%, two 95% vaccine, I think that's really great news.

But what drives variants is if you have people who are immunocompromised and take too much monoclonal antibodies, overuse of convalescent plasma, it's also a driver. And this is controversial because a one dose vaccine out of two, instead of both of them, actually yield us partial immunity, that allows the virus to mutate, which worries a lot of people because UK can't even guarantee everyone will get their second shot within 12 weeks when they should have gotten it within four.

But the good thing is that the vaccine does work, we can update the vaccine as necessary. And we're getting really good at that. And there's something still called public health measures, mask wearing, distancing, and especially attention to the fact that the viruses is an aerosol airborne, recognizing that will allow us to reduce the transmission fast enough until the vaccine rates are high enough to protect all of us.

So vaccines will be ultimately our solution. But until we get to high enough vaccination rate, which we know for the world will take some time, we still have to do very careful distancing, and control measures.

Margaret Flinter:

Well, Eric, I was stunned to read that Australia announced that it has had zero new cases, in the last 10 days, it seems almost unbelievable. And as you say, we have these tools available to us, we have the vaccine now. We have masking, we have social distancing, we have testing to monitor, we have contact tracing, as well. Is it even possible to imagine that we might see a day within the next few years where we can say zero new cases in the last 10 days? Or do you anticipate

that even with widespread vaccination that this is going to be the kind of infection that we see hotspots and pockets around the country really for several years to come. What's your sense of that, is it possible to really extinguish it?

Dr. Eric Feigle-Ding: Well, for I think this year, it will still be quite a while until we defeat it down to a very, very low level. The ultimate question is, will we extinguish it for good like smallpox or will it become endemic in which it becomes a seasonal virus. And I think that is simply a choice of our sheer political willpower, and public health funding levels to achieve it.

Obviously, the last mile into fully extinguish the last 1% of the cases will be obviously a lot harder than the early number of cases. But this is what we want. Do we want to live with this virus as a virus that comes and goes, most adults will have immunity from some sort, but children will carry it every once in a while, because they don't have previously seen this virus before. And, of course, it hits an elderly person who was unlucky? Or do we want to get rid of it for good?

Defeating smallpox was especially the last pockets of smallpox were not easy. D. A. Henderson he led the initiative and what they did was for every outbreak, they quickly lockdown their village or town and immunized everyone, hyper-immunized everyone and quarantined the whole town, until they're sure that is gone. And then they did that from place to place, village to village until they extinguished it.

Do we have the willpower to do that? If you have good leadership and state corporation of course, yes, we can. But if we don't have the willpower, the political will and the social will to do it, then it will become a resident virus long term. And this is why the zero-COVID approach, I believe in New Zealand and Australia and 14 day quarantine for anyone entering the country, which we do not have in this country, for example, is what is needed, but it is a matter of political will.

Mark Masselli: Margaret, you were mentioning Australia and I have some friends who are doing musical theatres because that's the only place that you can sort of launch them, but they have a very strict standard. If it goes above that the whole thing is shut down.

So I'm wondering a couple of things. (1), what's the level of immunity that people get when they get the virus? And we know that they're going to be on kids. We know that they're still haven't gotten the end that they need to start a new clinical trial. But talk about that, because at the end of the day, we're probably going to have to get a vaccine. Even if its low lethality for kids, we're probably going to want to develop a vaccine on that. So a couple of things about going on there. But, take them --

Dr Eric Feigle-Ding: That's a really good question. So first of all, the children's vaccine question. We will have it, it just takes longer, because what they need to do is adjust the dosing for kids, because kids range from 15 year olds down to toddlers. And the dosing has to be very, very precise. And then of course there's some countries like China, where they think they will probably get pediatric vaccine trial data returned by March. While some of the other countries, it will take longer likely into the summer.

And as opposed to the immunity, the immunity, first of all depends, well, first of all, are there going to be more evolution and mutations of the virus? If so, we clearly, it's shown that the Brazil and South Africa variants that can invade antibodies, if we have those, we're going to be in a little trouble, because past infection will not prevent it entirely.

In fact, in the South Africa Study, half the people who were previously infected and tested with the new virus, they had complete immune escape from those people's blood, which means it had no effect on half of the people. And so they're susceptible to reinfection. And that's what the South Africa, CDC declared. But in general, assuming if we don't have new hyper mutations that cause this significant drift or escape from the immune system, we should be protected pretty well. But again, some people are severe, and those who have severe cases develop stronger antibodies, those who had mild asymptomatic cases, oftentimes weaker antibodies. So in terms of previous infection, it's a very hodgepodge uncertainty.

But a vaccine gives you a constant high dosing. And the mRNA vaccines are designed to pump out a high, high number of these spike proteins for you to recognize. And they're more effective than monoclonal antibodies because it teaches you, how to recognize all of the spike protein. And so that's why all the data in the Phase 1, Phase-2 trials, and these new mutation studies show that the vaccine has stronger immune response than past convalescent patients.

So again, natural herd immunity is not the best way to go in addition to the risks of it, but especially for protection, long term vaccines are the best. And vaccines can be updated. And we will have the new data for children very soon, too.

So we're live in a brave new world, I'm glad in certain ways the pandemic didn't hit 10, 15 years ago. I'm glad in certain ways we should be grateful that we in a world that has Zoom technology that can keep half the economy going and collaborate across all distances of the world. And we have the technology to produce such high advanced vaccines so quickly, and at such precision.

Margaret Flinter: We've been speaking today with Dr. Eric Feigle-Ding, Epidemiologist

and Senior Fellow at the Federation of American Scientists learn more about his work by going to FAS for Federation of American scientists fas.org/experts/eric-feigl-ding Or follow him on Twitter @DrEricDing.

Eric, we want to thank you for your tenacity and tackling the mountain of emerging pandemic information and the clarity with which you communicated it out, for giving us all a glimpse at the rapidly evolving science around this incredible pandemic and for joining us today on Conversations on Health Care.

Dr Eric Feigle-Ding: Thank you so much.

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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: As Coronavirus cases spiked in December, states began vaccinating individuals throughout the United States. Let's look at how the vaccines are being administered and what we know about their safety? So far, the Food & Drug Administration has authorized two vaccines, one from Pfizer and BioNTech and another from Moderna. Both require two doses and had an efficacy of 94% or higher in clinical trials. States can make their own decisions on prioritization, but most are following guidance from the Centers for Disease Control and Prevention Advisory Committee on Immunization Practices, which concluded that the first vaccines should go to the nation's 21 million healthcare personnel and 3 million residents of long-term care facilities. The next prioritized groups include those 75 years of age and older and frontline essential workers. Following that are people between the ages of 65 and 74 anyone younger who has a high-risk medical condition and additional essential workers.

All of this means vaccine doses are unlikely to become available to the general public for several more months. As for side effects, trial data show that many people experience pain at the site of injection, fatigue, joint or muscle pain, headache, chills or fever. These reactions are more likely after the second dose, given several weeks after the first, and more common and severe in younger people. The FDA recommends that those who have had a serious allergic reaction to a previous dose of either vaccine skip the shot.

The CDC is also investigating and has advised that anyone who has previously experienced Anaphylaxis be monitored for a half hour after getting the shot. Everyone else should be monitored for 15 minutes.

And that's my fact check for this week. I'm Lori Robertson, Managing Editor of FactCheck.org.

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 checked, email us at 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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Mark Masselli: Each week Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives.

One in five Americans will suffer a diagnosable mental health condition in a given year, and most often don't seek treatment. For those with serious mental health conditions, the consequences can be devastating. Seeing a rise in mobile apps aimed at behavioral health entering the marketplace, University of Washington researcher, Dror Ben-Zeev thought a comparative effectiveness analysis study would be a good idea.

Dror Ben-Zeev: The three year comparative effectiveness trial, having a head-to-head comparison between a mobile health intervention for people with serious mental illness called FOCUS, and more traditional clinic-based group intervention called WRAP or Wellness Recovery Action Planning. So it's conducted at a clinic setting. So the study really gets at some of the core differences between mobile health and clinic-based care. Is there something about the mobile health approach that would make it more accessible or less accessible?

Mark Masselli: More than 90% of the mobile app group engaged in the online program, which was a series of text messages, offering coping strategies and self-monitoring of symptoms, along with weekly call-ins with a behavioral health clinician.

Dror Ben-Zeev: The second thing we wanted to see is after people complete care, what are their subjective ratings of their experience and treatment, are they satisfied with both intervention? And probably the most important piece of the study are the clinical outcomes. So we measure to see whether involvement in both interventions for 12 week period, would that create some sort of difference in psychiatric symptom severity, and 90% of the individuals who were randomized into the mobile health arm, actually went on to meet a mobile health specialist, to describe the app to them and train them how to use it. And whereas in the clinic-based arm, we saw that only 58% of the participants assigned to that clinic-based intervention ever made it in for a single session.

Eric Feigle-Ding

Mark Masselli: Ben-Zeev says this suggests that mobile therapies may provide a useful tool for clinicians having trouble getting those with serious mental health issues, to engage with the clinical interventions.

Dror Ben-Zeev: So we know that the very existence of a group can be quite helpful. But for others, the interaction is anxiety provoking. When it comes to the clinical outcomes, in both intervention arms people improved, both in terms of reduction in their symptoms and the distress associated with symptoms and improvements in their recovery.

Mark Masselli: A targeted mobile app aimed at facilitating access to clinical care for those experiencing serious mental illness symptoms, improving access to intervention for behavioral health needs. Now that's a bright idea.

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Mark Masselli: You've been listening to Conversations on Health Care. I'm Mark Masselli.

Margaret Flinter: And I'm Margaret Flinter.

Mark Masselli: Peace and Health.

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