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Politics, Science (&) Faith in the Era of Covid-19

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The Veritas Forum

A discussion about the history underlying mistrust of medical science, the development of the COVID-19 vaccines, and faith-informed responses to the pandemic. Hosted by: (&) Campaign NYC || andcampaign.org Speakers S. Joshua Swamidass - Associate Professor of Biomedical Engineering at Washington University, Saint Louis • Reverend Stephen Ko - Pastor of New York Chinese Alliance Church • Kayana Jean-Philippe - Healthcare Consultant and COVID-19 Vaccine Clinical Trial Participant • • Moderated by Rasool Berry - Teaching Pastor at The Bridge Church in Brooklyn, New York. • Please like, share, subscribe to and review this podcast. Thank you.

Transcript

(upbeat music) - Welcome to the Veritas Forum. - This is the Veritas Forum Podcast. - A place where ideas and beliefs converge.

- What I'm really gonna be watching is, which one has the resources in their worldview to be tolerant, respectful, and humble to where the people they disagree with? - How do we know whether the lives that we're living are meaningful? - If energy, light, gravity, and consciousness are in history, don't be surprised if you're going to get an element of this in God. - Today we hear a virtual forum hosted by New York University, a conversation between three different presenters and one moderator, including Josh Schwamadoss at the Department of Immunology and Pathology at Washington University School of Medicine, Kiana Jean-Philippe, a healthcare consultant at Cineos Health Consulting, as well as Reverend Stephen Ko, a medical doctor and pastor at the New York Chinese Alliance Church, moderated by Razzleberry, a teaching pastor at the Bridge Church in Brooklyn, New York. Together they embark on a wide ranging discussion covering politics, science, and faith in the era of COVID-19.

- Thank you all so much for joining us and what is gonna be a dynamic and I know robust conversation. How do I know that? Because as you already saw from this group's of distinguished panelists, just resumes and their backgrounds and their bios, this is a group of overachievers. This is a group of, they are the poster children for why can't you

be more like your sister, why can't you be more like your brother? I mean, the letters underneath, but in addition to the things that you've seen in terms of their academic prowess, they also have incredibly passionate hearts, varied interests, we've already found musical ability and one person I won't reveal who also kind of just let us know casually that they also moonlight as a clown in a magician on the side.

So I'll let them reveal that source to you, I won't be the one to do it. But in the meantime, I'm grateful to just kind of set the tone for us and really try to set a quick pace so that we can get to your questions because we wanna allow for as much opportunity for Q&A as possible. And really just to kind of set the stage of how we got here, Happy New Year, you might remember that around a year ago, most of us weren't thinking about global pandemics or Zoom at all, but in January 2020, the first case of COVID actually was recorded in the United States and found at a hospital in Washington.

I know here in Brooklyn, New York, where I'm reaching out to you from, that what started as one case in Washington became a crisis by the time March hit. We saw here in the city that our hospitals were overwhelmed and a life shut down as we knew it in many ways across the country and across the world. I pastor here at a church where I saw people who lost loved ones, had doctors calling them to tell them to say goodbye to their parents.

And just even one of our members here has, his family runs a funeral home and they talked about how they doubled the amount of funerals that they've directed from April through December, than they did the entire previous year and had to turn countless people away. It's been a tragic year for us. Just yesterday, the US recorded 4,367 deaths with an average over the last seven days of the equivalent of seeing a 9/11 happen every day.

Of course, just incredible amount of suffering and death. And so it brings us to this question, how do we make sense of this? How do we move forward, especially in light of the calls continued for physical distancing and now even opportunities for vaccines? And then how do we have a real conversation about some of the hesitations that exist in light of the histories? And when I talk about history, I can't help but think about 1932. It was in 1932 that the US Public Health Service in the Center for Disease Control started a study in collaboration with the historically black college in Alabama.

The purpose of the study was to observe the natural history of untreated syphilis. The African American men who participated in the study were told that they were receiving free healthcare from the federal government of the United States. And in this study, they enrolled 600 impoverished African American sharecroppers from Macon County, Georgia.

399 of them had latent syphilis with a control group of 201 who were not infected at all. And they were told as an incentive in the study that the men were promised free medical care but were actually deceived and were never informed that they were subjects for

their diagnosis. And they were disguised and given placebos, ineffective methods and diagnostic procedures as treatments.

So essentially, they were just watched and observed and lied to and told, for a listen to this, 40 years that they were participating in a study that was supposed to help them over 128 died. And even after antibiotics were developed in 1947, the study continued on and only stopped once the study leaked in the press in 1972. I mean, just a tragic historic moment as arguably called the most infamous biomedical research study in US history.

And one of the legacies of the Tuskegee experiment was the ongoing distrust of the science and medical professions as it relates to medical treatment. And so in light of this kind of history that we have in our country, that's just a few decades away, and in light of other questions and concerns that people have, I wanna just start off with this question of the vaccine and hesitancy. We have here with Kiana, someone who was actually a part of the trial.

So I wanna ask you, Kiana, like were you a hesitant to do the trial and tell us a little bit about your own personal experience and the context that you had that you got from doing it? - Sure. So I participated in Pfizer's phase one clinical trial for the COVID-19 vaccine. And it's something that I thought about a lot.

It's definitely not a decision I made lightly. I talked to a lot of people, I talked to a lot of my colleagues who were in the pharmaceutical space, just try to get an understanding of this. And I definitely was very hesitant to do it, especially being a phase one.

What made me feel better about it is because is that the mRNA vaccine, it's not the first time it's been tested. It's been, even though it's the first approved vaccine, that's mRNA, it's been tested before in several other diseases like Zika or Ebola. And so that made me feel a little bit better that it's not the first safety trial that was being done.

And it has been shown safe in patients in the past. So, and then during the entire trial, I was highly impressed at how transparent Pfizer was with me and how the clinical trial doctors at NYU, Langone, and the nurses were in every step of the process. I was there every week, doing all my tests, and they answered all of my many questions that I had.

And they were very, very transparent with the entire process. And when they had questions that they didn't have answers to, they let me know and they answered them when they could. And so we were all in the process together, trying to figure everything out together.

So we kind of felt like we were all a part of this. And the other question I think was, would I understand if other people are hesitant to take this vaccine? And I definitely understand that because I'm hesitant, I was hesitant about it in the beginning. I know a

lot of my family members are also hesitant to take this.

And what I think about is just, also when you read about all these allergic reactions happening with different people. And I was recently reading like 21 patients experienced anaphylactic reactions or severe reactions. And it is very concerning.

And I'm concerned about these reactions too. But when you think about it on a larger scale, I was trying to kind of put it into perspective where it's 1.9 million people, and then 21 of those had these reactions. So if you think about a larger picture, it's about 0.001% of patients who have these reactions, who all survived.

And so when I, thinking about it this way, it's really a risk versus benefit analysis here that you have to do for yourself. And is it worth the risk of potentially having some sort of reaction that a very small percentage of people are having as opposed to possibly getting COVID, having long-term health consequences from getting COVID, possibly dying from it, or spreading it to somebody else who could have long-term health consequences, or who could potentially die from it. So it's really a risk-first benefit outcome.

And so I think, I understand fully, and I think all of these hesitations are extremely valid. But I think it's really about the risk-first benefit here. - Got you.

Thanks so much for that. And just to clarify, and I'll probably have to do this with each of our panelists at some point, is to do a little vocab. You mentioned mRNA, and that was a key, kind of unique part of your story of what made you more kind of concerned, tell us what mRNA is and how that may contrast to the alternatives.

In terms of vaccines. - If it helps, I might be able to answer some of that. - Sure, go ahead.

- Some of my name's Josh Somedos, and Stephen Coase here too. So what's interesting about this vaccine, and part of the reason why it was able to be brought to the market soon is it's using a different approach than most vaccines do. It turns out it's not the first time it's been approved by the FDA.

The first one actually, surprisingly enough, was approved in December of 2019, right only discovered COVID actually, is when the very first one was approved by the FDA, based on a trial that had happened in 2014 through 2019. Now the key thing that's really different about how this particular type of vaccine works, is most of the time what we do with vaccines is we give protein or parts of the virus itself to get them to have a direct reaction against those proteins or those pieces of the virus. mRNA works differently, and what we do is we give our body the instruction codes to make the proteins, parts of the virus that will make.

But it's never enough to actually be able to produce an infectious virus, but it's enough

to actually, it's parts of the parts, I should say, to actually give us a strong immune reaction to it. And so that's what's really different about it. And there's some key things about that type of way making vaccines, which turns out makes it actually far easier to make vaccines a lot quicker.

So we really lucked out in a lot of ways that this technology really matured when it did. - Gotcha, thanks for that. And Reverend Co, I'm gonna ask you also, I kind of started off this segment talking about vaccine hesitancy, especially in the context of the African-American experience.

I know you've served as a global health professor and worked extensively in African Southeast Asia. Are there any hesitations there? Are there any patterns of this kind of concern that you have seen in other parts of the world? - Yeah, absolutely. And it is more pronounced in third world countries.

And so the COVID-19 pandemic has really exposed many of the underlying health and socioeconomic disparities, kind of making existing gaps more noticeable between resource rich countries and resource poor countries. And so I would say there's fundamental equalities or inequalities in the healthcare system and access to knowledge and also psychosocial determinants of health that they play a role in differing morbidity, mortality, and then the long-term sequelae, potentially from a COVID-19 disease or also vaccination. So when I talk about healthcare systems, we're really seeing unprecedented challenges in sort of the massive scale up, whether you're talking about SARS-CoV-2 testing, contact tracing, distribution of personal protective equipment or even patient treatment.

And now we're seeing vaccination or lack thereof. And so those challenges are definitely more pronounced in places where healthcare systems are suboptimal. So then if you look at the second area, that's disparities in access to knowledge.

And that's a lot of our black community and poor Hispanic, even where, you know, I work in New York City and Chinatown. And so that's disparities in access to knowledge, to knowing about the disease, like a word like M&R&A that Joshua just described. So healthcare workers, patients, and also individuals in the community have significantly diverse access to accurate information.

And that's been a real issue, obviously, over the last few years. And then finally, disparities across psychosocial determinants of health. And this includes, as you know, a well-racial housing, income, education, stress, racism and stigma, they all impact the disease and also your ability to receive treatment, including vaccination.

- Okay, let me, you just dropped a quarter word on a psycho-social determinants of health. And that's kind of a way of being an umbrella of all the different factors. And I think that's an important thing that people, oftentimes, don't think about when you talk

about health care, people, I think we tend to think about that in a very practical, low-hanging fruit kind of way of seeing a doctor.

But in that phrase, what you seem to be suggesting and what you see across the world is a dynamic where people, social location and some of the other factors of where they find themselves actually impacts health outcomes. - Yeah, that's absolutely correct. And so, yeah, this is really, it goes hand in hand with the issues of racism and inequality that we've been facing for some time.

And it's really more pronounced in a large city like New York. If I walk right outside of our church building on Eldridge and Lancy, there will be numerous homeless of different backgrounds, ethnicities and color. And so that really has a profound impact and our ability to receive quality health care.

Not to mention eat healthy food and obtain fruits and vegetables, et cetera. - Kiana, I'm curious about how, what was the reception of your family and friends when they heard you were participating in this trial? - Yeah, all of my friends, when I talked to them about whether I wanna do it or not, they said you shouldn't do it, I should not do it. And I actually have Japanese, have Haitian.

And so, when I talked to my mom about it, I think she was hesitant, but she was excited that I was doing this new thing. When I talked to my father about it, who's from Haiti, he had a very, very different type of response. And he said, people like us don't do these sorts of vaccine trials or any sort of clinical trials.

Pharma is not on our side. So it was definitely a very opposite reaction that I got from him. He was not pleased that I did this trial.

But I think what made him realize that it's that, that is that I do work in the pharma space. This is the area that I know most about. And I had done a lot of research to try to understand like what are my options here? Like, is this a safe thing to do? And so I think he felt better about it.

And my friends as well, once I kind of explained to them like why I did it. And it's also a being from a, coming from a public health background, like, infectious diseases is actually what I studied back in undergrad and masters. And so this is kind of the area that I had wanted to be in.

And I wanted to do some sort of work in it. But as I'm not a physician, so I can't, you know, directly treat patients. But I wanted to do my part in helping in this pandemic.

And so, you know, being one of the first patients to take this vaccine, I felt like that was kind of my way of contributing. - Got you. And I'm gonna ask this one last question to you, Josh, before you know, we actually transitioned to this next segment, talking to you.

So it's kind of appropriate. But one person I'm trying to snipe off a Q&A here from Slido. Lindsay Hall asked, "I've heard people say that I'm not anti-vaccine.

I just want to wait and see how it goes with other people before I get it myself." And I think, I know earlier we spoke and you talked about some of the things of, some of the just variables and consequences to time. So could you speak to that, Josh? - Well, first of all, it's not just you who wants to wait and just hear how it goes for other people. We all do.

I mean, what's interesting about the trial that Kayla was part of, I'm not sure if I'm pronouncing your name right. - Kiana. - Kiana, sorry.

What's interesting about that trial is that it started in March of last year. And the reason why it wasn't broadly available was because we were waiting to see how it worked on a large group of people. Like the Pfizer trial alone for one of the vaccines had nearly 44,000 people in it.

And we got to wait and watch and see what happened with them. And so I think it's a very good instinct. The key thing though, is that you actually do want to wait and see what happens.

(laughs) Then you don't want to always be in that space once we've had a chance to see, you want to move to a different spot. And I think this really matters. I think there's a couple of misunderstandings that are out there that should give us a sense of urgency.

One really big, deep misunderstanding, this idea is that, well, if we just wait long enough, just by getting exposed to the virus, eventually we'll reach herd immunity and it'll die out. The key thing to just keep in mind is that, for a large number of viruses, perhaps most of them, and likely with COVID, they never go away. You never reach herd immunity.

And the reason why is that the virus will mutate into different antigens. Another reason why is that, especially in COVID, it really, we're starting to worry, we've worried that maybe immunity, once you get infected, doesn't last that long. And if you think about it, we get the flu, the seasonal flu every year.

And what's going on is that the seasonal flu, it just continually crosses between species and it continually bounces between the two hemispheres. And we have not ever gotten rid of the flu. It's always there with us.

And that's really the type of two worlds we're choosing between, a world in which COVID is always with us, or one in which we stamp it out. And right now, we have an opportunity to stamp it out in time matters. So I think we need to be careful about playing too fast and loose with this.

This is something, I mean, I don't know about you, but I think everyone agrees that the world before COVID was better. Let's try and get back to that world, that's possible. - And Josh, I'm glad you said that, 'cause I think we need to zoom out for, I love historical context, right? And some of this, we kind of, if we jumped to 2019, 2020, 2021, we miss out the fact that a century before now, we actually had another pandemic that... - Spanish flu.

- Right, the world, the Spanish flu, which was, I guess, roughly about 1918, people identified this flu. And ironically, it was only called the Spanish flu, not because it originated in Spain, but because there was a world war, none of the other countries were honest in admitting the fact that there was a pandemic because Spain was neutral, they had no skin in the game, and so they just started to announce in their public press, "Hey, there's something type of scourge and plague that's affecting a lot of people." But that's another story for another day. But here's the question for you, Josh.

The vaccine for the flu, the flu vaccine that we now know and hear and talked about all the many years before 2019, not as much, it came out in 1940, in the '40s, right? Like more than two decades after the Spanish flu epidemic, how do we wrap our heads around the incredible speed that we got to not even a year? And we've seen, before vaccines and trials were on their way, even months into it, how does that happen? And also talk to us about the global historic span, not just of the flu, but we at measles, polio, there are these other things that were commonplace and were very destructive in the human condition that we've kind of forgotten about because of the widespread success of vaccines. So yeah, help us understand the speed and then also the stakes or the weight based on what we've seen and other illnesses in the past. - Yeah, I will do that, but I know there's a lot of anxiety, I wanna start by just kind of offering you a different emotion, which is the emotion that I'm really feeling right now, which is an immense amount of gratitude, an immense amount of gratitude.

This morning, my wife dropped me off at work, which I haven't been able to go to for months now 'cause I'm a computational scientist. So for better or worse, I can do my scientific work at home, right? (laughs) But I went in and I got my first dose of the COVID vaccine and I'm looking forward to being able to take the next one, my arms a little sore, but that's entirely worth it. They say that people get like a pretty bad fever, that's entirely worth it.

We've talked about anaphylaxis, even that would be worth it because anaphylaxis isn't deadly. - Okay, well, what is anaphylaxis? - Anaphylaxis is a really bad, that's like one of the more severe reactions that happen to a vaccine. It's like a very strong immune reaction, like maybe like getting a bee sting if you're allergic, but it's treatable.

And the thing about it is that I was there in the hospital at WashU and so it's the best place in the world to be if you're gonna have anaphylaxis, like a sock shock. So even the

worst of it is totally worth it. And I'm really grateful, it could have been really different.

Let me tell you a couple examples of what it's grateful and first of all, it was quicker than any of us expected. I'll explain to you a little bit about why in a moment, far quicker, I talk to experts at the time and I do work in drug development. It takes years and years to develop a drug, to develop a vaccine.

And that's not why it happened here. No one really expected that by December of the same year we'd be doing that, we'd be putting it out there. And I'll explain to you some of the key reasons why that happened, but that's shocking and that it's surprising, I'm very grateful.

It's also really important to keep in mind that there's more than one vaccine. I'm really grateful for that. This is what that means.

That means if we find out surprisingly down on the line that there's a problem with one of the vaccines, we could just switch over to all using the other ones. So all of our eggs are not in one basket. And not only that, there's now a very strong incentive for these companies and politicians to be able to call out issues in vaccines if they arise because it's not like it's the one shot they have.

If there's a problem with the Pfizer vaccine, if Dorna will say something, you can bet it. 'Cause there's a lot of money in it for them to say something. - On that, before you go on, I just wanna jump in real quick 'cause we got a question from the audience that I think is really relevant to this point.

Being that there is more than one vaccine, how selective should we be about which vaccine we've received? - And that's another thing that's really something to be grateful for. It turns out what we're seeing is there are differences between the vaccines that you usually have to do with our difficulty in actually the supply chain and getting into. One of the weird things about mRNA vaccines is they require really, really deep freeze.

Negative 70, compare that to maybe negative 10 or negative five for your home freezer. Most hospitals actually don't have negative 70 freezers. And so this is like a major challenge.

And so some of the vaccines, there's different rules on how you can do it. Some of them are easier. So there is a difference between the vaccines on that level.

But so far it seems like all the vaccines that we're gonna have available to us have efficacy or effectiveness. And this is really surprising to be clear. It didn't have to be this way.

This is not true of most vaccines. It's not true of the flu virus. It turns out that the vast majority have an efficacy of 90 to 95%.

That is not, we really lucked out. And I think there's a question about how it's working as well. I don't even think the science has really figured out fully on why it's working so well.

We really lucked out. It just didn't have to be that way, but it is. So it turns out, in terms of from a patient point of view, I think right now, I think the best advice is the one you should take is the one that you're offered.

(laughs) The one you have an opportunity to. So I think Steven took the Moderna vaccine. I took the Pfizer one.

And the reason why is they were offering the Pfizer one. And there could have been a lot of issues with equity with maybe certain populations getting access to a better vaccine than the others, but that's just not the problem we have now. I'm so grateful that that's not a problem that we're having.

What's also really interesting, which is also probably gonna be true across the country, is that I didn't have to pay a cent out of pocket to take it. I mean, frankly, I would have paid a lot of money to take this vaccine. (laughs) Because it's that important.

I mean, it's gonna really open up my life into new ways, and I want all my family members to take it. But I was able to take it for free. I mean, how grateful I am for that.

So these are the things I'm grateful for. You asked why was that it happened so quickly. I mean, there's gonna be books written about this.

There might even be some movies. This is a really surprising thing. It's hard to explain to you as a person who's worked in this field for decades now, how stunning and surprising and amazing of a feat this is.

And I wanna tell you that there were several scientists very skeptical. One of my colleagues here at WashU, Michael Kinch, was in public, stating he was skeptical about how quickly he was coming through. They wanna make sure no corners were cut.

You know, a lot of people have been looking very closely to make sure no corners were cut. So how did it happen so quickly? Part of it was new technology. It is not easy to bring a vaccine to trial immediately.

Usually there's a lot of steps that have to be done. But the thing about mRNA vaccines is it cut down dramatically on the number of steps that you have to do for a new disease. There's a lot of work that has to be done, but once you've done that work, it just works for any disease.

Like the hard thing about messenger RNA is that when you put it into your bloodstream or you eat it or you do something with that, it normally dissolves against destroyed by

enzymes in your bodies almost instantaneously. So the real challenge is not how do you get rid of this, but how do you keep it alive long enough to actually get into your body and actually do something useful? That turns out to be the really challenging problem with mRNA. That's probably the reason why we're not so worried about a lot of the more creative science fiction sorts of side effects.

I have a family member who's pregnant right now. She asked, well, is it possible that mRNA can come in and then somehow get to my baby and do that? I think that would be, that would be the level of science fiction given the types of challenges that it's taken to actually be able to get this thing to work. Now, I mean, biology surprising, surprising things can happen, but that is very hard to imagine.

I mean, that's good to hear. And I love the perspective on gratitude as well. Kiana, I'm curious about side effects.

- I think it's telling you why it's going fast. That's okay, maybe we'll get to it later. - Yeah, yeah, we'll get back.

I just wanna make sure we got time for each segment, but any side effects that you had from the trials, and which one did you take, which vaccine were your trial? - Sure, so I was a clinical trial member for the Pfizer phase one. So yes, I did have side effects, but just to keep in mind, I was in phase one, meaning it was dose testing. So the dose that you're all receiving is about 30 microliters.

I received 100. And so my reactions were a bit more, you know, a bit more than what you would be experiencing with the 30. So I had fever, chills, nausea and all of this, but for, they discontinued the 100 microliter dose the day after we all, the 10 of us in the group received it.

So they will not be offering this to, you know, to the general public. And I think, you know, in the group that received the lower doses, and then the phase three, with, when they were testing thousands and thousands of patients in the lower dose, it seemed like, you know, the most severe was a fever. And so it lasted just a day or two.

So, you know, there are some people that will experience side effects, and that's to be expected. But, you know, it's, I think, still in the end, when you think about the risk of getting COVID or getting this side effect, it's still, you know, it's a lot with the risk. - So we have you to thank for the fact that we're not getting at 100 dose.

Thank you so much, Kana, for taking one for the team. And speaking of taking one for the team, I think that's probably an appropriate way for me to kind of transition to this next segment, where we talk about faith-informed responses to COVID-19. And again, one of the things that was really helpful and grounding for me about a month into this process, living in New York City, was a very fast forum, had did a panel with several

incredible experts, including Andy Crouch and some mothers.

And he shared this history of the fact of, you know, we have context of what's happened in plagues in the past, or in pandemics in the past. And specifically, there was one that I thought was really interesting. And there was the Plague of Cyprian, which no Cyprian wasn't the cause of the plague, which is why it bears his name.

But this was a pandemic that afflicted the Roman Empire between 249 to 262, you know, so just several centuries, you know, common era. And it's known as the Plague of Cyprian because of Bishop of Carthage, which is North Africa, Cyprian became known because of his writing and serving the needs of those who were afflicted. And many people talk about how the unique era or response of the Christian community in that time really created an acceleration of the message it gave a sense of, you know, people were amazed by the fact that when so many of the wealthy elites were leaving and departing and fleeing from these cities, that many of their Christian counterparts were actually even braving deadly contagions and being exposed in order to serve.

And as I heard about that and heard that story and I'm like, man, that's encouraging. And yet at the same time, we've seen so many churches and Christians in our country, you know, of course, not necessarily the majority, but you know, you hear these things that stands out to you who've resisted masks and even calls not to meet together. So, you know, Reverend Cole, your, you know, your, you know, a pastor as well as a, you know, professor as well as a medical doctor, what, how can you help us understand how from a faith standpoint, and we have folks here representing many different faiths and perspectives, but particularly from what can we learn from that, you know, early Christian story up until now in terms of how to think about a faith form response to a crisis like this? - Yeah, absolutely.

And if you look at the Cyprian and Antoine in plagues in the first and second century, Rodney Stark, a sociologist has written a wonderful book, *The Rise of Christianity*, which he really states the case that Christianity blossomed in the face of pandemics and plagues. And so for me, I start out by saying there's a tremendous sense of peace knowing that God is sovereign overall. And I take great solace in the words of Colossians 1:16 through 17, for by him, all things were created in heaven and on earth, visible and invisible, whether thrones or dominions or rulers or authorities, all things were created through him and for him.

It was true pre-COVID, it's true in the throes of the pandemic and it will be true when life returns to normal. You see, pandemics are unique and confronting us with not just one sick individual, but millions of ill patients. And we experience how the responsible pathogen, in this case, COVID-19, overwhelms both individual immune systems and community health care systems as well.

The toll is both personal and collective. But the term pandemic is a modern one. And

while its modern plagues and pestilence have existed since antiquity, just as you said, the Hebrew and Greek words were both occurred countless times in the scriptures.

But what do they mean? In the Old Testament, plagues and pestilence often represented a demonstration of God's divine judgment. You think about the horrific plagues that ravaged the nation of Egypt, this pharaoh refused, pleased to free the Israelites. But in contrast, pandemics and plagues often heralded Eshkatim in the New Testament.

You see that in Matthew 24 and Luke 21, famine, plagues and pestilence, they marked the beginning of the sorrows. And then that final glorious chapter of Revelation, the last of the seven plagues signals the triumphant return of Christ. I personally believe that God uses pandemics and plagues to highlight inequalities and disparities, while sometimes enacting judgment on the sin of individuals and nations.

His vigorous defense of the marginalized shows just how much he despises inequality. And Malachi three to five warns us that he will come near to you for judgment and testify against those who defraud laborers in their wages, who oppress the widows and the fatherless. Yet while plagues symbolize the judgment of God and the results of evil, they also serve to shake Christians in their faith and awaken non-Christians to faith.

They reveal our insufficiency, our frailty, and our mortality. And they confront us with our idolatries while forcing us to see the overwhelming needs around us. They invite us to repent of self-interest, pride, and self-centeredness.

And they provide opportunities for communion out of a deeper felt need for God in the face of risk and fear, while serving as a motivation to outreach to our neighbors. I love the quote by C.S. Lewis, that pain insists upon being attended to. And God whispers to us in our pleasures, speaks in our conscience, that shouts in our pains.

It's his megaphone to rouse a deaf world. But, Rasul, what is more important than the meaning of pandemics? It's really how each of us responds to them. And what sets Christians apart from others is this notion of incarnational living predicated on the life of Christ.

You see, the mark of a believer is the reversal of worldly principles, ideology, and morality, while humanity values strength, power, and comfort. Christ chose strength made perfect in weakness, power through the Holy Spirit, and self-sacrificial love and surrender. 2020, we've had many opportunities to respond, whether through the sacrifice of social distancing, the wearing of masks, or other preventive measures.

Each of our choices provided a chance to grapple with the concept of incarnational health, both individually and collectively. You see, by definition, incarnational health decisions present in innate tension. On the one side is the idea of sanctification of the body.

First Corinthians 6, 19 to 20 teaches us that our bodies are a temple of the Holy Spirit, and therefore we should glorify God with them. But on the other hand, we are a sacrifice for lives for the sake of others, that they too might experience Christ just as Jesus did. That's what Christians have done, as you said, since the time of Cyprian and the Antoine in plagues, to the present day of Bala and COVID.

The leavers like Dr. Kent Brantley willingly risked exposure to death, to Ebola, to treat those patients. Brantley even returned after you covered from disease. Yet vaccines, they're very unique in allowing both sanctification of the body and sacrifice of our bodies.

By allowing them to see COVID-19, we direct our B&T cells to deal with the virus. Remember, disease, illness, and aging are a direct or indirect consequence of sin. And though Jesus erased the eternal effects of sin once and for all, the earthly effects remains.

Vaccines also allow us to sacrifice our bodies. So others might live and experience Christ. They instruct our bodies to develop immunity, protecting others from COVID-19.

And when enough individuals are protected, potentially herd immunity can be achieved, safeguarding entire communities. Therefore, a ritual, vaccinations are incarnational responses to health for each of us. And when we see them in this light, we understand they are more than just decisions made in a vacuum, but rather a choice to live as Christ did.

- Wow, okay, that's a lot to digest. Thank you so much for that perspective. I mean, one of the things that idea that of incarnational health, this idea that somehow, what I got from that was, there's so much sometimes in American culture, there can be session obsession around right and what I get to do.

And I think what I heard you say is that a way to live out the sense of generosity of spirit that's innate in our faith is to think about this, not just what I got to do, but what do I get to do for somebody else? What do I get to do for the greater good? And that somehow the process of, you know, being a part of the solution that we saw in the 200s up to now that we can do our part, that all of that is an important thing. So thank you so much for sharing that. All right, so this is what we're gonna do panel because we're now in the Q&A section where we get to really kind of do what I call a lightning round.

So this is how lightning round works. I'm gonna set up my online stopwatch. I'm going to give you 60 seconds to answer the question.

And then after that, we'll have to move on still 'cause I wanna get as many answers as possible. Can we, is that good enough? Is that fair? 60 seconds? All right, cool. So I'm gonna start, Josh, I know you had more left that you were gonna share about, I think in

the context of maybe previous, you know, impact that vaccines have had on diseases like polio, measles, is that what you had loaded up or you wanted to talk about something else? - Well, I mean, only if you're interested about part of the reason why it happened so quickly.

- I think you answered that, right? Because of the mRNA thing, or is there something, there was something-- - That was one, there's a lot more reasons, but it's okay, whatever is interesting and helpful for you guys. We're gonna have questions, right? - I'm gonna go with the people then. I'm gonna go with the people I'm just gonna look at.

So one of the most requested or liked questions is, how do I encourage people, church, family members, et cetera, to wear their masks, get the vaccine and socially distance? So who would like to take that? - So I think the person asking that obviously has having trouble convincing people in their community to do that, and I gotta say that I'm not alone. I have family members that are skeptical about this stuff. It can be pretty hard to talk to them.

I think one of the first things to do, I would say, is to actually set a good example and actually do these things even if the people around you are not. It's safer for you, and as you do that, that can actually change the conversation with them as well. The second thing too is, be kind to them, hear them out, and keep on pointing them to good information.

You don't have to win every argument, but just keep on pointing them to good information. And when they send you that crazy Facebook meme, send them to the snopes thing that debunks it. And kind of say, you know, there's other points to this, and just keep on pointing the good information and be kind about it.

Don't be angry. - All right, good job. Right at one minute too, perfect timing.

- If I may, I'll take 30 seconds or 40 seconds. - Sure, go ahead. - I would say we need stout theological and scientific response.

And so there's a lot of latent distrust. And so we look to the science, the medicine, and the public health, but we also, if it's Christians, we look to the scriptures. And so that's why I believe the incarnational living approach is really key, because it's counterintuitive to the Western culture of me, me, me, but it is solely in the center of the gospel and the way that Jesus would live.

So we live incarnationally, and we make incarnational health choices. And so it is not only a sacrifice for others, but as I presented before, it is also treating our bodies and temple with the living God. - Great, thank you so much.

Another question, how do we get information regarding what is in these vaccines and potential side effects? Kiana, I don't know, particularly with your role, you know, in

working in pharmaceutical companies, if you have some good insight about just getting information, where would you recommend people go? - Yeah, I mean, that's definitely a hard thing because there's so much information out there and so much information overload. You know, every source I see, I try to verify with another source, you know? And so, you know, things like the CDC or any of the government websites, you know, going to the pharma websites as well, research articles, published peer reviewed articles, as well as, yeah, we're all going to, yeah, I mean, those are the major sources. Every time I see a new source, you know, I'll check the link to see where that information is coming from.

And just verifying everything, 'cause there is a lot out there. And also when you read things like, you know, this many people died of this, like try to understand like why they died, what was it about, you know, like, what's the underlying effect? So try to like read more into it and then talk to people, talk to people who are in the medical space if you have, you know, people that you trust. - Mm, great man.

You guys are doing perfect on this timing. I'm so impressed. So another question, and I actually want to try to take a crack at this one myself in the y'all could tell, it's, can you talking about disparities in access to health education and specifically mentioned referencing Reverend Co., can you recommend reputable, easy to understand resources we can share with people? Specifically, I think that kind of illustrate those disparities.

One resource that I have used quite a bit is AMPResearchLab.org. This is a website that has been tracking the, it's called the APM Research Lab and they look at deaths by race and ethnicity in the United States. I found that to be helpful. Reverend Co., I'm, you know, please add any or anyone else of our panelists, other thoughts about just kind of any resources in particular, I deal with kind of those disparities socioeconomically.

- Yeah, this is actually a huge topic and, you know, we're doing with Denver Seminary, a topic on racism and healthcare disparities actually in a few months. But in general, you know, I would actually direct you to the CDC website for top level information because for every disease and illness, whether chronic or infectious, there's disparities and inequalities, you know, whether you're talking diabetes or COVID or heart disease or cancer. And so you can really dig down into the data and that's kind of a very reputable source that then there are also a lot of other, you know, sources of information with COVID in particular, if you're in New York City right now, you know, as part of a kind of a task force of messaging for a while that is still going on.

And so you can look to the New York City website and you can find a lot of resources on messaging. If I may add just a second on the adverse events, you know, that Kina was mentioning, the CDC puts out something called the MMWR where Vidian and Mortality Weekly Report. And this is a great way to sort of track these adverse reactions.

In fact, there's a new one coming out tomorrow on Moderna and it's gonna show that

there's been about four million doses of Moderna so far and only 10 cases of that anaphylaxis that Joshua was talking about and roughly about, you know, 100 events of possible cases of severe allergic reaction. And if you look at Pfizer, you know, there's been about two million doses in 21 cases of anaphylaxis. So this is a way to really track and the way CDC does this is they have a system called Bears and Bears and they track all the adverse events.

And as a personal anecdote, you know, I got the vaccine Saturday and so you sit down just as Joshua and Kiana did and then you have to wait for, you know, 20 minutes or more to make sure you're not having any reactions. And then nowadays there's an app that checks on you. You know, it's like beep, beep, beep, you know, then, you know, a few hours, you know, or you do know K, do you have a fever, et cetera, et cetera.

And so all of this information is collated and tracked. And so you can find that information. And it's public because there's actually a far easier way than going and checking it out for yourself in this particular situation.

Bad things happen in the dark, but there is no dark on this case. Everyone is looking at it. So one thing you can just do is trust that if there's a problem, a lot of people will be raising the alarm and that is very true.

And so maybe you don't have to be the one that has to. You can just trust. - Right.

And actually I wanted to turn the corner back to this question of like the role of faith and just thinking about this issue of science. And Josh, I know you've written a book on the genealogical history of, or the genealogical Adam and Eve. Tell us about how these two worlds, which oftentimes are seen as diametrically opposed, that you see a way of looking at that differently.

- Well, I'm not entirely sure how the book itself connects to this conversation, except to say that, in a lot of things, science has a cliiting with our real world and it starts interacting with a lot of conflicts, that really hits our moment. You can see that over this last year about how the clovid stuff ended up becoming a political issue, when it really is just a health and scientific issue. And you can see how there's a gap between how, how we in the public sometimes take hold of stuff that's in science.

Like science is a pretty technical, precise way of understanding things. But a lot of times people who even come to us telling us what science is, haven't always been trustworthy and sometimes get really big things wrong. In my book, I kind of found out of some really big places that people promoting mainstream science to the public had just got some stuff wrong about human ancestry.

Turns out that Adam and Eve really could be ancestors of us all and really live recently. They could have even been the novo created and that could be true alongside evolution.

Now, that's a different story about how, but that sort of stuff, I think really, the fact that that could even happen, that could be hiding in plain sight and people missed it, just gets to the point that science is complicated.

There's a lot of stuff here where we can really miss important things and it really benefits as more and more people look at it. And there's always going to be that gap where we have to rely on science to make decisions, but we don't fully understand it either. And ultimately, that's just the way it is in everything.

And we have to rely a great deal on people to act and trust for the ways. And that's why things like the Tuskegee experiments and that history is so corrosive. Because ultimately, we have to trust, we have to trust that the people who are watching and are doing a good job.

But if you don't trust them, some of the stuff you can't actually really look at for yourself. And so how do you solve that problem? Well, that's a very hard problem to solve. Like I'm saying, in this case, it's easier than most.

Because everyone's looking. The places where real abuses happen is when no one's looking. But right now, everyone's looking.

- That's a good word. And a lot of the questions that are coming in do, in fact, have to do with the vaccine. One question in particular, and I'll just let any of you who want to kind of chime in.

How do you explain the importance of this vaccine to those who are convinced that this is part of a so-called pandemic, especially because of the spread, the speed of the development of it? So I guess this is a little bit similar to the previous question, but maybe with a little harsher edge of like, not just skepticism, but hardened cynicism to conspiracy theory. - But even in that conspiracy theory, that would be an effective vaccine. So even if it was a pandemic, and it was already planned out to take, that's all the more reason to take the dang thing, because that means that they knew they were putting a disease out there that could cure.

So that just doesn't make sense. Okay. (laughs) I mean, we can think, I mean, everyone's gonna think, I mean, not everyone.

There's always gonna be people who think crazy things. That's fine, all right. But even in that world, they should be taking the vaccine.

I mean, they should be mad about it, maybe, but they'll be taking it because they don't wanna go. They don't wanna go over it. - And this is where I thought the history of the fact that again, people under probably 80 just don't know about polio or measles, but can one of you, anybody would like to share about just the recent history? I mean, within the last 100 years that we've had of seeing the significance of vaccines in the context of

illnesses that were ravishing whole communities or a significant portion of our society.

- Well, I think that- - One thing I wanna see you go for, that's right up your alley. - Either way. (laughs) You know, I think what gets lost in all of this is that vaccinations are a wonderful public health success story.

And so, it's easy to forget after we have vaccinations, outside of COVID-19, you know, there's a whole plethora as a pediatrician that we give to our children, as young as Burke, but then two, four, six months, you know, MMR and varicella, you know, one year. So what's lost in all of this is the pre-vaxxin era which you find significant more biddian mortality. And you really need to look no further than third world countries that are still having great difficulty immunizing their populations to see how debilitating disease is there.

And I think, you know, your reference in particular result is to polio. And that's just magnificent that, you know, we have been on the cusp for a while of eradicating polio. And there's just a few pockets in the world, you know, where it's a little bit more difficult.

But eradication is, you know, that word is amazing. That we're eradicating disease from the earth. And so you think about the possibility of that.

And, you know, Joshua was kind of referencing, you know, you know, where are we gonna go? We're sort of at a crossroad right now with COVID. If we do the right thing, you know, maybe we can stop it. But if we continue to go on this track and sort of kind of doing social distancing, taking the vaccine, not taking vaccination, then you'll get these mutants.

There's already three circulating around the world right now. And it looks like, you know, at least the two vaccines will still work against it. But we don't want you to use another word.

Now, mutant is a word that I'm familiar with in the MCU, the Marvel Cinematic Universe. I'm not as familiar with in the context of vaccine. - Well, this means that there's just been a genetic change to the virus, so it acts a little differently.

And, - Okay. - And that could make the virus worse for us, it could better for us. More infectious, less infectious, or maybe even have it escape the vaccine too.

So that's the thing that hasn't happened yet, I don't believe, but that could happen. - Yeah, and it's really similar to those Marvel comics or, you know, the- - Well, I mean, let's be serious. There's not gonna be any of the virus with superpowers.

- Right, right, that's true. That's true. - So I could start walking on walls and stuff.

(laughing) - So it is not similar quite that much. I mean, there's- - It is, he didn't finish

this. You know, Rebel Cole, what were you saying? It's similar in what regard? - In the regard that, you know, something that started out some way changes or is different, you know, you won't necessarily grow superpowers, like Josh said, but, you know, what is concerning, you know, you have three variants in England, South Africa, Brazil right now.

And the vaccine seemed to work well, but, you know, I believe, you know, out of the CDC or Greg Armstrong's lab, he's now been able to grow an immune escape strain with three mutations that offers almost complete resistance to the antibodies and survivors' blood. So then that's the kind of concerning thing where, you know, the only way to stop this is to stop replication, you know, to get the vaccine to do the right thing in terms of, you know, social distancing, et cetera. So that's where, you know, the analogy of the metaphor ends.

- Yeah, I think also one thing that can help in thinking through this with people who are kind of caught up in some of these more alternative ways of viewing the world is, you know, to do some comparison or like some of some other reason they've had. I mean, most of the people I know who are skeptical of the vaccine were also all about hydroxychloroquine as a treatment. And if you look at the risks of taking a hydroxychloroquine on a regular basis and the risks of increased apart attacks and all these other sorts of things, you know, it's actually much, much higher than the risks of taking a vaccine.

So why are they concerned about the vaccine when they weren't concerned about that? I mean, that's a, that's like a question that I think is really important for people who are really pressing for that drug to be used to really figure out when it comes to the vaccine that they don't want to take. - Got it. Kayana, one of the things right now it's the hottest question on Slido and how can I trust the CDC pharma and the FDA they were wrong before? Yeah, what are your thoughts? - I mean, it's a valid question, right? Like, I think everyone is still trying to figure out what COVID-19 is, right? Like we don't have, you know, 100% understanding of what this disease is.

I think everyone is trying to figure out every single day what this is. And so, you know, I think they're doing the best. Like can the FDA, you know, they are expediting processes and making sure that, you know, vaccines are approved faster, but at the same time, they are, there's a million checks behind the scenes that goes on.

And then, you know, in top of the FDA approvals there's also the federal approval and then there's the state level approvals that New York is doing too. And so it seems like there's, because of the hesitancy, there's added checks before anything gets approved. And in terms, even with the clinical trial too, there's been, you know, several levels of approval before anything can happen.

And so, you know, I think they're, that's very valid, the skepticism there, but I think, you know, everyone is trying to do the best they can to make sure that everyone is safe. But

also, you know, in the digital age of social media, one thing that's posted about some negative, you know, side effect or consequence. And then, you know, the world, you know, is looking at it.

And so they, I think, are very much, youth organizations are very aware of that and they're very cautious about everything. So, you know, not to say that they're always correct, they will make mistakes, you know, these are humans too. But, you know, I think from my experience working with, you know, FDA regulatory people, they're honestly doing the best they can and working 24 hours a day to make sure that this is safe.

- Got it. Next question I wanna get to. - Can I add to that one or do you really wanna? - Yeah, go ahead.

Please. - Yeah, I just say that it's, the reason why you should trust it is that, first of all, science is really complex. Anyone doing science makes mistakes.

The really good news is that you know that mistakes were made. The place where you should get really concerned is if it seems like no mistakes were made and no one will fuss up to it 'cause mistakes are always mistakes made when you make, when you do science especially in something like this. I think what's really encouraged me is that there has been acknowledgement of mistakes and also transparency about them and changes.

So instead of doubling down on the same bad idea is that people have changed and that's exactly what you wanna see from trustworthy people. - Got you. So one of the questions that's come up that is pretty significant, especially not only did this happen in the vaccine get developed in record time, but also the level of efficacy is also pretty significant.

We're talking in the range like you've mentioned before, 90% while the flu vaccine is somewhere around 30%. How are we able to explain the, how much more effective this vaccine is especially given the shorter amount of time in which it was developed? - Well, so we got lucky in a lot of ways. We really got lucky.

It didn't have to be this way. I mean, I think a big question, I mean, the goal was to have something better than 50% efficacy and to get something 95 is like kind of beyond everyone's wildest dreams.

Now, we don't know the full story, but part of it is that the biology of this virus is different than the flu. So the flu has a segmented genome and part of the reason why we get it every year is because of humans living in close proximity with poultry or like birds or pigs. That's why it's called like a pig flu sometimes or the avian flu.

And what happens is that there's a reassortment process that happens where a human virus will recombine and kind of take some DNA from multiple different sources,

including like a pig or a bird. And that's what will kind of give a big antigenic shift. And so there's a lot more diversity and changes happening in the flu population from year to year.

And we don't really have any vaccine that can hit at the same time all the different possible types. So it's kind of a crop shot every year where we have to make a good prediction about what type of flu is gonna be a big one. And sometimes we make a good prediction and it does better.

And other times we don't. And we kind of were playing whack-a-mole and we hit the wrong hole and it came up in a different place. And so that's not, at least not yet, probably have with coronavirus.

I don't think we'll have it in quite the same way because there isn't people living in close proximity with bats and there isn't a lot of other species hosts. And also the biology of this virus is different, but that's why it's so difficult with the flu. And we've just lucked out that the place where the really bad virus came has had a lot more genetic stability.

And we just got lucky that the vaccines worked. - Got it. I think that one of the things that since resting in the Spanish flu 100 years ago, there was kind of a double pandemic in the fact that there was a world war of the first ever.

And at the same time as the actual flu was happening. And both of those had something to do with each other. In this past year, we've had another kind of aspect of double pandemics in terms of looking at the just, you know, spade of just tragic deaths of unarmed, you know, black people.

- Oh yeah. - You know, folks like Breonna Taylor, George Floyd, Ahmad Arbery, Ray Shar Brooks. So I wanna talk a little bit about just some of those racial and ethnic realities and how they kind of intervene with some of this, you know, reality of the pandemic.

Kiana, I think in particular, since you participated in the trials, I was curious about, can you talk about some of the, maybe the differences in the, you know, it's from a racial equity standpoint of the clinical trials in Pfizer, Moderna, Moderna, or other vaccines. - Sure. So I can only speak about Pfizer 'cause I don't really know, you know, the racial breakdown of the others.

So, you know, in the phase one trial, there was probably, I think 45 of us, there was, I think, three black. And sadly, I was a citizen as Asian and not black 'cause there was no biracial option. So it was very limited.

And then in the phase three, they did a strong push to get African-Americans, Hispanics, Latinos, all these different types of people. And there was, you know, I had flyers everywhere that they were giving out. I live in Harlem, so I put flyers up in my building and around town to get people to sign up.

And they were really adamant about getting people who are at higher risk. And we've seen, you know, from the CDC data that people who are black, African-American, or, you know, Hispanic are working in, you know, as essential workers are most at risk for this. And so they did a strong push to get these people in the clinical trials.

I don't know the exact numbers of how many, you know, what the racial breakdowns was for phase three. But I think that, you know, they, in conversations I've had with these nurses and doctors at Pfizer trial as well, they were doing a strong push in getting racial diversity in these trials. And I think, you know, this, this is, it's more important than, I mean, I think there's obviously all, it has been hesitancy, you know, in these populations.

So it's more a reason to, you know, to make sure that they're including everyone, making sure that they're being transparent about what the trial is all about, making sure they understand the risks. So I think they, you know, they did a strong push to really get diversity in these trials. - Got it.

All right, I'm gonna start pumping out two at a time now 'cause they're really coming in fast and furious. I'll let you kind of have an option of which one that you wanna ask a question. Option one continuing on this thread, how likely one asked are we to see COVID vaccinations become a job requirement? And if that becomes a reality, might it further disenfranchise black and Latino people? That's option one.

The second question, there's quite a few about long-term side effects and how can we be at all confident about it's safe and health in dealing with the possibility of long-term side effects if we haven't had enough time to study it. So who wants to take which? You go ahead, pretty said go. - I guess I'll take the long-term consequence of the vaccine.

So the short answer is we don't know, but the long answer is, you know, the clinical trial didn't end in just seven months, right? Like even though the vaccines is out there for the public, the clinical trial for at least for phase one goes for two years. And so, you know, I'm still being monitored every month to make sure that, you know, my blood levels look fine and nothing's wrong with me. If something happens, I have my clinical trial doctor's phone number, I can call him right away.

You know, he's very responsive. I called him on like Sunday afternoon one day and he picked up and was, you know, happy to talk to me. So they're definitely monitoring us for two years to make sure that nothing happens.

And so, you know, even though, you know, the vaccine is out, they are still making sure that it's that there are long-term, you know, health, health, it's that safe long-term. But again, I go back to this like risk-first benefit situation, right? It's like if you got the vaccine or, you know, there we don't know if there's long-term health consequences, but we know for a fact there is long-term health consequences for getting COVID, right? And so how it affects your lungs or your, you know, ability to smell and taste and all of these

things, neurological effects. So we've already seen that there's a lot of long-term consequences for COVID.

And so it's again, that risk-first benefit analysis you have to do. Yeah, thank you. What was the first question again? I was.

I was. I was. Yeah, the first question was in regard to.

Oh, yeah. We need to do better jobs. And yeah.

Yeah. So I think it's likely that as soon as maybe even April or maybe May, everyone will have an opportunity to take it for, take it for, essentially for free or very, very low cost. So I think that really reduces my concern that there could be a situation where, you know, job requirements, if that were to happen for taking the COVID vaccine would really create a great deal of inequity.

Because if everyone has access to it, that shouldn't be as much of a problem. Got it. Got it.

There also is the issue of travel. And so, you know, along with jobs and then potentially further down the line for schools, you know, you see a little bit more in terms of children, elementary, middle, high school, the need to, you know, obtain certain vaccinations to attend school. So, you know, this is something that we'll have to sort of continue to monitor.

But I know if you look state to state, which is part of the larger issue of distribution of vaccinations and equity as well, but that, you know, we need sort of a little bit more of a centralized structure. So then state to date, there's a lot of variation. And then that also leads into travel.

You know, I think potentially some of the states are already considering these types of things right now. And then another comment on, you know, the long-term side effects and short-term AEs as well, is that, you know, even for a typical clinical trial of a drug or another vaccine, even if you take that typical 72 month process, you know, you still are going to have to follow that out, you know, beyond that time, right? And that's where systems like bearers and bearers do come in. But it is really important to underscore the, you know, significant mortality that, hey, 3500 to 4000 people are dying every day right now, right? So then, you know, you sort of kind of got to balance the scale right there.

But in general, you know, like I was saying before, you know, so far, you know, it looks pretty good in regards to, you know, some of the side effects and, you know, we could drill down into the weeds of some of the potential ones. Got it. And maybe again, I think context is so important for a lot of these things.

You mentioned, you know, I think you said 72 months, were you talking about the

process of evaluating long-term - Post-market surveillance. - Got it. So there's use, okay.

So 72 months, which is, I can't do the math, help me figure out how many years that is. (laughing) - It's about six years or so. - Six years, there we go.

So that's about six years. And it's a kind of typical, you know, window that people look at and kind of we're in the midst of that. But what the reality of the urgency of this situation that we're talking about, 400,000 people dead in the US over the span of, you know, I mean, literally a year, which is more than World War II, right? I mean, like in light of that kind of severity, there's a kind of need to be urgent as well as cautious about making sure that you put something out in a way.

Now in the history of vaccines, as there been like something that would like appear fine for the first two years, no immediate, you know, first six months or years. - In the history of vaccines, in vaccine development, not all vaccines actually make it the market. A lot of them end up having issues that you catch early on.

And actually in this sense, vaccines are a lot easier to pick up issues early than drugs are, usually. I mean, there are exceptions. And even in, you feel like over the last 10 years, there's been two drugs that, you know, actually this post-market survey, I mean, two vaccines, I believe, where, you know, the post-market surveillance actually worked and they identified real issues.

And I don't think they got pulled from the market to be clear because what happens is they weren't severe enough to require that, what it required is just managing it better. Actually, most of the ways how we know how vaccines cause, can cause certain side effects, things like, the Jelon-Barre syndrome and things like that, is because this has been very closely watched for large numbers of people and we know precisely what the percentages are for a lot of vaccines. We know which vaccines cause it and which ones don't.

And most of them don't have an issue. - Got it. - So I will mention specifically, you know, vaccines wise, you know, as a pediatrician, the rotavirus vaccines have an interesting history.

And so right now we do have a rotavirus vaccine, a rotaryx out there, but rota shield was pulled off the market you know, many years ago because it caused a very rare disease bowel obstruction that we call in a subsection. But you know, that's one example to your question there. And that's why we do track, you know, all of these, you know, adverse reactions.

- I think that's a great example to point to cause it shows that just cause there's a problem with one rotavirus vaccine doesn't mean it also applied to the other one. The other thing too is it shows that when there was a problem, it was identified and it was

pulled from the market. And so that's, that should be very, very encouraging for us.

- Yeah, that's right. Well, we got, we got just about two minutes left and I want to give you guys an opportunity to have a one last word. I mean, one thought that has been coming up kind of repeatedly is kind of the disorientation around why some Christians have been so against mask wearing and denouncing mask and other precautions.

And I guess I just want to open up the floor to give you kind of one last word of thought. Maybe, you know, Reverend Cohen might be good to hear from you about this as a pastor yourself. And you talked about the theology of a pandemic.

But so if you could just do one last lightning round, about 45 seconds each. And kind of give us your closing words and thoughts and sentiments, all right? - Yeah, you know, I'll start, I don't mind. James 5:16 says, you know, "Confess your sins to one another and be anointed with oil in the name of the Lord Jesus Christ, and the prayer of the elders who are laid over you will save you, and the Lord will heal you." And I do believe that healing is real.

God can heal us miraculously. And I've seen it even as a physician. And so I think, you know, there has been a dichotomy because there's a natural tension, just like the tension I was talking about before, that will God protect us? Will you heal us naturally versus, do I need the intervention of science and medicine? And that's where, you know, biology comes in.

And I believe there is an intersection. And that's why you need theology and science medicine and public health together, that they don't occur in a vacuum. They need to be collaborative.

And so, you know, I think a lot of the divide in the last several years is sort of digging our heels and not listening to one another with grace and mercy, coming to the table and discussing and saying, "Okay, there's a lot more complexity to theology than just the sacrifice of social distancing." You know, and that's why I sort of presented two ways to look at incarnational health choices. But I do believe that, you know, as pastors in congregations, we have a tall order. You know, if our body is really a temple of a living God, then, you know, we should really lean into the theology.

It's more than just COVID vaccines, right? It's eating healthy, you know, what do we usually have, you know, for our peer meetings? Fried chicken and donuts, you know, we need to be eating healthy with fruits and vegetables as well. I could talk quite a bit more.
- All right, now, Doc, you're starting to convict us now.

I think we need to move on. I think we need to move on. No, thank you so much for that.

Kiana, I'd love to hear from you. - Sure. I'm not sure what the question was, but if this just-- - Just any last thoughts or reflections? - Yeah, I think, you know, I think there's something to keep in mind is, when you do get the vaccine, it's not over yet, you know? Like, unfortunately, you know, we can't have parties and walk around without a mask on

still.

It's very much, you know, caring for the other people around us and protecting them. So for me, you know, I don't feel like I can just walk around, take the subway and not wear a mask. It's still about, you know, protecting everybody else and setting that example for everyone else, of, you know, staying safe and protecting everyone.

So I think, you know, just to keep in mind that, you know, it's just, I think it's just a lot of patience that we need because, you know, we're so excited to get this vaccine. And then when we do, it's kind of anticlimatic if we still have to social distance and do all this, you know, these precautions. But I think it's just a matter of, you know, protecting everybody else and thinking about, it's not about me, it's about everybody else.

- Got it. And Joshua, you got the last word. - So the question is why do we see what we see sometimes in the church that is the way it is? I think the reality is that we live in a really divided society right now.

It's a very fractured society. This is not the way it's supposed to be. And people don't trust each other across disagreements.

We tend to see things primarily through a political framing first. And we tend to have a great deal of distrust when we feel like there's actions being taken by powerful people that we distrust. And I think that the church has been very susceptible to this African American community has been to.

Everyone has really been suffering from this. It's really across the board. And I think one thing that I hope you take hold of, and I'm pretty sure you'll agree with me frankly, a student's listening in is that this is really nuts.

We need a better way to deal with this. We need a better way to work through this. This is a fractured society.

We need something better. We need to see something. And we need to be praying for God's kingdom to come here on earth.

And for his will to be done here as it's done in heaven. That's really what we need something better. And here's the thing where I get a lot of hope.

I talk to people your parents age, and I have mixed feelings at times to be honest. But when I talk to people your age, I think you know, I can't see you in the audience because this is Zoom, right? But when I do, I see it in your faces. And I'm pretty sure it's true.

I think you know that this is not the way the world is supposed to be. I think you know you want something better. I think you're gonna do better than your parents' generation.

And I think that gives me a great deal of hope. Mm-hmm.

(gentle music) - If you like this and you wanna hear more, like, share, review, and subscribe to this podcast.

And from all of us here at the Veritas Forum, thank you.

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