

THE ECONOMIC CLUB

O F W A S H I N G T O N, D. C.

Virtual Signature Event

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ANNOUNCER: Please welcome David Rubenstein, president of The Economic Club of Washington, D.C.

DAVID M. RUBENSTEIN: Welcome, everyone. I want to thank you for coming to our 12th Virtual Signature Event of our 35th season. But for the calendar year it's obviously our first event. And I wanted to thank everybody for coming to this event. We have a larger attendance, I think, than any event we've ever had of our members. And that's obviously because of our special guest today, Dr. Tony Fauci, who's the director of the National Institute of Allergy and Infectious Diseases. And we're going to discuss a whole range of issues related to COVID-19 and the vaccination situation.

Thank you very much, Tony, for being here today.

ANTHONY S. FAUCI, M.D.: My pleasure. Good to be with you, David.

MR. RUBENSTEIN: Now, Tony, it was reported that you went to the North Pole to vaccinate Santa Claus. And my question is, one, did he get that vaccine because he was over the age of, let's say, 70 or because he was an essential health care worker? What qualification did he have to get the vaccine?

DR. FAUCI: It was both, David. Both. So I wanted to make sure we did it correctly and no one got offended, so he had both categories. Yes, indeed, both.

MR. RUBENSTEIN: Did he have any side effects?

DR. FAUCI: His arm hurt a little bit for about 24 hours, and then after that it was good.

MR. RUBENSTEIN: OK. So now you were vaccinated recently. Did you have any side effects?

DR. FAUCI: No, actually. It was really relatively benign, David. As with most vaccinations, you can get a little bit of an ache in your arm. It starts about eight to 10 hours after the vaccination. It lasts no more than 24 to 36 hours. I didn't get any fever or chills or muscle aches. So it was a pretty benign experience.

MR. RUBENSTEIN: And have you found that there have been a lot of side effects from others? There was a report that some people – I think it was in Alaska – who had some severe side effects. Is that because the vaccine wasn't properly refrigerated or what would you say is the reason for that?

DR. FAUCI: No, no, not at all. There have been reports – there have been now between 4 and 5 million doses of vaccine that have been distributed. There were reports – the Alaskan report that you mentioned, and then there were some reports from the U.K. in the vaccine -- that's the Pfizer vaccine and then a couple in the Moderna vaccine -- of anaphylactic-type reactions of people who have a history of a severe allergic reaction. They were – now that we've gone into millions, it's an unusual complication. It's reversible and treatable. And apart from that, there have been

no other serious adverse events. So the recommendation is that if you have a history of a severe allergic reaction when you get the vaccine you should get it applied to you in a location where someone could treat an allergic reaction if you get it. But it has now turned out, as we get into the millions of people who've received it, to be an unusual adverse event.

MR. RUBENSTEIN: The vaccine – so let's suppose – I haven't been vaccinated yet, but suppose I have a choice, I can get a Pfizer, or Moderna, or somebody else. Does it really make a difference? Are they all essentially the same?

DR. FAUCI: Well, the only ones that we have data on, David, are the Moderna and the Pfizer. They're both the same type of vaccine. It's called an mRNA or a messenger RNA vaccine. Interestingly, the data on each of those was virtually identical. They have about a 94 to 95 percent efficacy percentage, which is really quite impressive, and the safety profile is the same. So it doesn't matter which of those two you get. They're essentially equivalent.

MR. RUBENSTEIN: OK. Now, let's suppose you've already had COVID-19, as some members of my family have. Should they get the vaccine or not?

DR. FAUCI: They should, David. But they should wait about 90 days after they have gotten the infection. So for example, we feel that the individuals who get infected are protected for a while, but we don't know how long. So in order to assure that they don't get re-infected we do recommend that people who have been infected actually do get a vaccine. So you shouldn't rule yourself out.

MR. RUBENSTEIN: OK. If you get the vaccine do you need to wear a mask anymore, or you can forget the masks?

DR. FAUCI: No, you should wear a mask. And the reason is the primary end point for the vaccine efficacy was whether it prevented you from getting clinically recognizable disease. It certainly prevents you from getting severe disease. But what we don't know yet is whether it prevents you from getting asymptomatic infection. In other words, does the vaccine prevent you from actually getting the virus that replicates in your nasal pharynx? So since we don't know that yet, it is recommended that you wear a mask.

The second thing is, until we get the overwhelming majority of people in the population – and I would imagine that would be about 70-85 percent – if we get them vaccinated, we'll get to a level of what we call herd immunity, which means that there'll be very little opportunity for the virus to circulate in the community. When that occurs, then you could pull back a bit on the public health measures. But until that occurs, there's still going to be a lot of virus circulating in the community. And that's the reason why we continue to recommend strongly that people abide by the public health measures of universal wearing of masks, physical distancing, and avoiding crowds and congregant settings, particularly indoors.

MR. RUBENSTEIN: OK. So you would say that the new strain that has been coming out – there's reports of a strain, I think it's called N501Y – I don't know where they get that name

from – but that is in South Africa and England and so forth. A virulent strain. Is the vaccine going to be effective against that strain?

DR. FAUCI: Well, David, be careful of the use of the word “virulent.” So let me tell where we stand. There are two types of mutants that have occurred – one in the U.K., which has now really dominated the spread of infection there. The Brits have looked at it carefully. We are now in the process of also examining it. It is in the United States but there have been individual reports. It doesn’t dominate the scene in the United States.

What it does, according to the Brits, is that it makes it easier for the virus to spread from person to person. So it is a virus that is in many respects more transmissible. It is not, according to the Brits, more virulent. Virulent means it makes you more sick and has a better chance of killing you. That does not appear to be the case. Nor does it appear to be the case that it escapes the protection that’s induced by the vaccines that we’re using.

The one from the Republic of South Africa is a little bit more complicated because it overlaps a bit with the mutation in the U.K., but it is a little bit more complicated because some of those mutations might have a negative impact on the efficacy of some of the monoclonal antibodies that are used. So we’re looking into that very carefully.

MR. RUBENSTEIN: OK. Now, why do you have to get two shots for a vaccine? I understand Johnson & Johnson has a one-shot vaccine. But why – when I get a vaccine for other things, like polio or measles, it’s a one shot. Why was this a two-shot vaccine?

DR. FAUCI: Well, when we did the clinical trials, David, it became clear that although you had some degree of immunity and protection after the first dose, the boost that you get with the second dose elevates that almost by tenfold. So the amount of protection that you get after the second dose, it’s considerably more than the first dose. And for that reason the standard recommendation for Moderna is a primary followed in 28 days by a boost, and for Pfizer it’s a primary followed by 21 days for the boost.

MR. RUBENSTEIN: OK. So let’s suppose somebody gets the initial shot and they say: I don’t want a second one. My arm hurt too much. Or I forget to get the second one, or whatever. Is there any efficacy to having the first shot without getting the second shot?

DR. FAUCI: Well, you won’t get optimal efficacy. You’ll get some degree of protection. And what we don’t know is how long is the duration of that protection. We do know that the duration of the protection is at least several months, likely more. Maybe a year or more than that. We need to follow them longer. But we do know that the duration of only a single shot and the optimal effect of only a single shot is not nearly as good as the boost following the single shot.

MR. RUBENSTEIN: Well, suppose somebody says: I really want to be protected so I’m going to go get a Pfizer shot and a Pfizer boost and then a month or two later I’m going to get a Moderna shot and a Moderna boost. Is that going to help the person or hurt the person?

DR. FAUCI: Well, it almost certainly wouldn't hurt the person, but the clinical studies have not been done to show whether that would be of any added benefit. So, I mean, obviously you could do it. Theoretically it might make it better. But that would not be anything that we would advise doing for the simple reason that the shot that's the prime and the boost is 94-95 percent effective. It's tough to get any better than that when you're doing a vaccine.

MR. RUBENSTEIN: So for normal vaccines – let's say polio vaccine, or measles vaccine, or mumps, is 94-95 basically the best you can get? There's no such thing as 100 percent?

DR. FAUCI: Well, nothing is 100 percent with vaccinology. But probably the best we have is measles, which is about 98 percent effective. So we're not quite as good as measles, but we're really close with 94-95. So this would rank among the really very, very good, efficacious vaccines.

MR. RUBENSTEIN: Now there were no tests done, as I understand it, in the testing process for these vaccines, for people who already had COVID-19. In other words, I think you – the testing was for people who didn't have it. Is that correct? Or did you actually test people who actually had COVID-19?

DR. FAUCI: We actually had about 2 percent or more of the people who came into the trial – when we did antibody tests on specimens that were drawn before we vaccinated them, we found that they actually had been exposed and infected with the SARS-CoV-2. So it's a very small percentage. You can't get any really meaningful data from that. But there was an inclusion to the tune of a little bit more than 2 percent of people who actually had been infected prior to the vaccination.

MR. RUBENSTEIN: Now, in the history of science I assume that getting a vaccine like this done in basically nine months is a historic achievement. Is there anything that's ever been done this quickly before in the vaccination world?

DR. FAUCI: David, not even close. So you're absolutely right, it is historic. The sequence of the new virus was made public on the 9th of January of 2020. And in December of this year the first doses went into the arms of people, following a vaccine trials – plural, since there were two of them – that showed the 94 to 95 percent efficacy. Under most circumstances of vaccinology this would have taken several years to accomplish. And indeed – I might add, David, so people don't get the wrong impression, the speed did not sacrifice safety, nor did it sacrifice scientific integrity.

It was a reflection of the really breathtaking advances in the science of vaccine platform technology and the enormous amount of investment that was made to essentially manufacture doses of the virus – of the vaccine – excuse me – before you even knew that it worked. So the companies – or, rather, the United States government, since we bankrolled it – the government took a very big risk financially to make an investment in something before we even knew it worked.

The other thing that's important is there was so much infection in the community that the clinical trials were completed in a manner of months rather than years, because the two things that give you an answer quickly is the number of people in the trial – and in the Moderna trial there were 30,000 people; in the Pfizer trial there were 44,000 people. So that's on the very high side. And the second thing is the amount of infection in the community. And as you know, we are in a very, very difficult surge of cases in our country that is record breaking every single day. It's terrible. Terrible for society, but it makes testing a vaccine much easier.

MR. RUBENSTEIN: Well, let me ask you, when you get vaccinated you get it in your arm. And when I was younger, as a kid, I think you used to get in a different part of the anatomy, to have a shot in. Why is it the arm that's the best place to get it now?

DR. FAUCI: Well, you want to get it into a muscle. And a very accessible muscle is this deltoid muscle right there. So it's easy to do. And it's quick. You want to pick another muscle, it doesn't make much sense to give it in the butt because you have to go put your pants down, you know, stick it in. Whereas here you just lift your sleeve up and you stick the needle in.

MR. RUBENSTEIN: I see. OK. So, well that was the part of the anatomy I was referring to. But I guess they don't do that anymore. OK. So let me ask you, if you were in a trial and you got a placebo, not the vaccine, do you now know that you got the placebo, and do you get kind of the head of the line for some reason to get a vaccine?

DR. FAUCI: Yes. In most vaccines, and it differs from company to company and vaccine, but the standard thing that happens is once the data are made known that the people can say: I want to get unblinded. I want to know whether I got the vaccine or not. And most companies will let them know and give them the vaccine since they were a willing participant in the trial. So ultimately they get the vaccine anyway.

MR. RUBENSTEIN: So today there has been some criticism of the fact that the vaccine is not being distributed quite as quickly as people would like. I think you had said you would hope that 20 million would have been vaccinated by the end of the year, and I think we're well below that. Why do you think that the care that was put into doing the vaccine, developing it, the same type of care wasn't put into figuring out how to actually get it distributed?

DR. FAUCI: Well, David, I think we have to wait for the first couple of weeks in January to make any determination as to what's gone wrong, if anything. Clearly, no excuses, we should have gotten 20 distributed and 20 into the arms of people. By 20 I mean 20 million. What happened is that whenever you have a brand-new massive program, the likes of which we've never undertaken before on a national basis, and you start it in the middle of the holiday season between Christmas and New Year's, I think there's a good reason – again, no excuses – but you can explain why you may not have gotten to the level you want.

Now, not to make excuses, we should have done better. So let me make that clear. We should have done better. But I think we should wait until we get into maybe the second or the third week in January to see if we can now catch up with the original pace that was set.

MR. RUBENSTEIN: Now, Israel has vaccinated, I think, 10 percent or more of the population already in Israel. How did they get the vaccine so quickly distributed?

DR. FAUCI: Well, you know, different countries have different systems, different health care systems. I mean, those countries that have a unified national health care system generally can just get things in by plugging it into their system. As you know, we have a very wide, heterogeneous health care approach. So first of all, we wanted to get it to the hospital workers. That is the first priority, and then to people in nursing homes. The rollout of that, as you mentioned, appropriately and accurately, was not as smooth as we would have wanted. It really depends on the system that you have in place of delivering health care.

MR. RUBENSTEIN: Now, on herd immunity, early on you were saying that herd immunity would be met at roughly 60 percent. I think you're now saying maybe it's 80 or 90 percent. Can you explain why you have increased what you think is the appropriate percentage for herd immunity?

DR. FAUCI: Well, you know, David, I think it's important for people to know, we do not know what level or what percentage of the population needs to be vaccinated in order to get herd immunity. And by herd immunity you mean enough protection in the society that the virus really has no place to go because most of the people are protected. We don't know what that percentage is. We know what the percentage is in measles, because we've had experience for decades with measles and what happens when you do not get a certain percentage of people vaccinated.

So I had originally said – about 70 percent is what I had said. Then when I – when I did an extrapolation to measles I said, well, you know, measles is 98 percent effective vaccine. We know that when they go below 90 percent of the population – as we saw with the Orthodox Jewish population in New York because they didn't vaccinate their community, when they got down into the 80s, they lost a degree of herd immunity. Now, measles is one of the most transmissible viruses known to man. In fact, it might be the most transmissible.

The more transmissible the virus is, the higher percentage of the population that you need to get vaccinated to get herd immunity. For measles, that was about 93 percent or so – 94 percent. When you get below 90 you get into trouble. So I merely made a calculation and said: Since coronavirus is highly transmissible but not quite as much as measles, and the protection is 94 to 95 percent, not quite as much as the 98 percent of measles, I brought up my projection – which, again, is still a guesstimate – and I said: Well, now it's probably somewhere between 70 and 85 percent. A bit short of what's required of measles, but higher than what I originally estimated. So that's the somewhat long story of why I was saying 70-75 in the beginning, and then I brought it up to 70 to 85 percent.

MR. RUBENSTEIN: Now, do you think the U.S. government, or any state government, or employers should be able to require employees, or workers, or individuals to be vaccinated?

DR. FAUCI: Well, we're certainly not going to have a central mandate from the federal government. But the precedent for requiring vaccinations is not new. For example, right now

myself, as a physician that sees patients at the NIH clinical center, it is required that I get vaccinated with the influenza vaccine every year, otherwise I'm not allowed to see patients. So there are requirements already. So I would imagine that some industrial entities, some schools, and other entities might actually, at the local level, require that people get vaccinated before they can participate in whatever function of that institution is. I mean, we do it already in public schools. If you don't show a certificate of being vaccinated you're not allowed to be in the school.

MR. RUBENSTEIN: Now, we have had more than 350,000 Americans die from COVID. Some people say these statistics are not accurate. Some people say actually we've lost more, some people say we've lost less. Is there a standard that we use to calculate whether it's a COVID-related death, and is that different for other countries around the world?

DR. FAUCI: Ours is about the same as other countries. I believe that that number, that's over 350,000 deaths, is a real number. Obviously, there are some cases that are missed, and maybe some cases that are felt to be COVID and they really primarily died of others. But I think at the end of the day it's going to be a wash. They'll likely essentially eliminate each other. I think that the 350-plus-thousand is a real number. And that's a really, really bad number.

MR. RUBENSTEIN: Based on projections, it is projected by some specialists in this area that we might lose as many as 450,000 people before this over. Is that a fair estimate in your view?

DR. FAUCI: Well, that's what the models tell us, David. We're going now between 2-and-3,000 deaths per day. So if you just do the math on that and say, you know, three months from now or close to 100 days from now, you know, that's another 3,000 times 100. You know, that's a lot of – a lot of deaths.

MR. RUBENSTEIN: Why are – why is the hospitals now so full that they can't even take new patients, in many cases? What is causing this virulence at this point? And we're losing more people now than three or four months ago, a day?

DR. FAUCI: Yeah. Well, David, I hate to correct you, but just for a technical – because somebody will email me about it – it's not the word virulence. Virulence means how serious the disease is. Transmissibility is when you get a lot of new infection. So why is this virus being transmitted so readily right now? There are a number of reasons for that. First of all, I think people in many parts of the country are so fatigued – we call it COVID fatigue – with abiding by the public health measures that they're not doing the simple things to protect themselves. The wearing of masks, the physical separation, and the avoiding congregant settings.

You take that and superimpose upon that that we are now in the winter months – the late fall/early winter – which in fact has people do things indoors much more preferentially than outdoors, which is always really bad for a respiratory-borne illness. And third, we've had sequential holiday seasons where people have traveled, gone into crowded airports and train stations, got on planes and trains, went to different parts of the country to visit their loved ones – which is totally understandable but not really good for public health. And then they get into settings where you have dinners and social gatherings, which are very characteristic of the

holiday season. Well, although these things are wonderful, again, they're bad for transmissible infections that are respiratory borne.

So I think all of those three factors together are the reason why we're seeing this surge.

MR. RUBENSTEIN: But if you go to a hospital today and you have COVID-19, are the hospitals better able to treat you than six months ago because they know much more about how to treat you, or are they not really knowing much more than they did six months ago?

DR. FAUCI: No, it's much better. In fact, if you look at the rate of deaths – not the number of deaths, but the rate of deaths – are less. For example, we know how to treat people with advanced disease that require intensive care, intubation, and ventilation much better now than we did, let's say, six months ago. That is a natural evolution with any disease. When you see a lot of it you get much better at treating it.

MR. RUBENSTEIN: Are we losing so many people because we're doing more testing? Is testing the reason that people are dying?

DR. FAUCI: Absolutely not. People are dying because they're infected, and they're sick, and there are more infections, more hospitalizations, and more deaths. Those are real numbers.

MR. RUBENSTEIN: Now, on testing, I've been tested several times. One time you spit into a tube and they give you the results in two days, or something like that. Another time they put a swab halfway up your brain and maybe it affects your gray matter somewhat. And sometimes they just put a little bit in your nose. So what is the most effective way to be tested? And is there one gold standard for a testing that you would recommend that people use?

DR. FAUCI: Well, probably the best one that doesn't cause you a lot of discomfort is what's called the mid-turbinate. When you swish around the swab in the anterior part you may miss what's back there. If you go all the way back it feels like it went into your eye. You don't need to do that, David. You can do a mid-turbinate which is halfway in between swabbing around, stick it in, and you'll get a very accurate result. So that's the gold standard, a PCR or a molecular test.

MR. RUBENSTEIN: And is testing better than it was at the beginning of this? In other words, can anybody get a test if they want to get a test, which is what we once thought was the case but sometimes people still tell me they don't know how to get a test.

DR. FAUCI: Yeah, that's true. We're getting better and better. We're not where I would like it to be. What I would like to see is – and we're almost there, because there are tests that now you can get in a pharmacy and get it done yourself. I would like to see what's called a point of care test, which is sensitive, specific, inexpensive. You could buy it yourself without a prescription and you could get the result yourself. That is doable. That's what I'd like to see a lot of, so people would know if they want to go visit their parents, or their children, or whomever that they are not infected. That, I hope, is where we get very soon.

MR. RUBENSTEIN: If you are infected and you go to a hospital there are some therapeutics I guess people are being given. President Trump apparently got a therapeutic, and I guess Rudy Giuliani got a therapeutic that seems to be a wonder drug. Can anybody get that wonder drug if they need it?

DR. FAUCI: Well, none of them are wonder drugs. They are shown to be helpful enough that Remdesivir has been approved and the monoclonal antibodies that the president and Giuliani received are under what's called an emergency use authorization. Which means, it is available, but your physician would have to request it from the company to get it.

MR. RUBENSTEIN: So, OK, but if you get it, it does seem to work, right?

DR. FAUCI: Well, there are data that are shown from a number of trials indicate that it does benefit you. The earlier you get it, the better is the effect.

MR. RUBENSTEIN: OK. And today would you say that we're making as much progress in getting therapeutics available to people as we are in vaccines, or how would you compare –

DR. FAUCI: No, no. That's a good question, David. Vaccines are a clear homerun if you want to be metaphorical about it. It's really a homerun in that we have already, after 11 months, we have a very efficacious vaccine that's safe. The real challenge is just getting it into the arms of people. With therapeutics, I would say it's maybe a single or a double. It's not a homerun yet, because we don't really have the kinds of drugs where you give it that can stop the virus in its tracks. That's what we need. That's what we're making major investments in trying to get.

MR. RUBENSTEIN: If somebody wants to be tested, let's suppose you got to fly overseas or you need to be tested for some reason, what is the best way for an average citizen to get a test today?

DR. FAUCI: Yeah. Well, there are a number of clinics that make tests available. Your physician, if you have one, could tell you the best way to do it. Could be drawing of blood, send it out to places like LabCorp and Quest and others. And then there are now these other tests that I'm telling you about that are being able to be available in pharmaceutical establishments, such as drug stores.

MR. RUBENSTEIN: OK. The vaccine that has been approved today – there are two of them in the United States, Pfizer and Moderna. Do you anticipate others to be approved relatively in the near future?

DR. FAUCI: Yes, I do, David. Right now there's another company called Janssen, which is the pharmaceutical component of Johnson & Johnson. They have completed the enrollment of their clinical trial. We'll be getting data that will be submitted to the FDA very likely by the end of January. And hopefully by February we will have doses that will be able to be distributed – hopefully. I think I'm pretty close in my projections there, but the final determination will be made by the company.

There are a couple of other companies that are getting support from the U.S. government. One of them is AstraZeneca, which has another trial that's ongoing in this country as well as in the U.K. And there's another company right in our local area here called Novavax, which is a different vaccine that is being tested. So all in all, we have five that are in play right now.

MR. RUBENSTEIN: OK. These that are in play and the two that have been approved are operating under emergency authorization. But will they get permanent authorization or is it going to be permanent emergency authorization?

DR. FAUCI: No, the data – again, I don't want to get ahead of the FDA, David. But if you look at the data, which I have, they are really quite impressive. The safety data is sound. But to get 94 to 95 percent efficacy and to protect even better against serious disease is something that I think is going to be a pretty good pathway to permanent approval of both of these. But again, I don't want to get ahead of the FDA. It's their decision.

MR. RUBENSTEIN: So have you noticed that – what I've noticed in myself that I'm staying at home a lot. I'm gaining a lot of weight. Is that a big problem for my health? Or how do you – how do you stay in shape when you're trying to stay at home all the time?

DR. FAUCI: Well, David, what I recommend you do is that you go out, get a mask on, and do some exercise, be it walking or running. But you are correct that there is, when you ask people – for the most part, people when you have nothing else to do but be cooped up, one of the things is you eat more. So people are actually gaining weight more than they normally would under circumstances that would allow them to be out and about. But I know you do exercise. I know that. So why don't you just keep it up?

MR. RUBENSTEIN: I think about exercising a lot. [Laughter.] You power walk with your wife every night, I guess, or something like that.

DR. FAUCI: Yes.

MR. RUBENSTEIN: Is that three miles, or something like that?

DR. FAUCI: Yeah. About three or four miles in the –

MR. RUBENSTEIN: When it's cold outside don't you say, well, I'll skip a day, or something like that?

DR. FAUCI: You know, you got to sometimes force yourself out the door. Like, last night when we went out in our run or power walk, as it were – I don't run as much as I used to – it hurt a little for the first, I'd say, quarter of a mile. I was really cold, until I warmed up a bit. And then I was fine.

MR. RUBENSTEIN: OK. So you are – you've worked for six United States presidents. You've been the head of the division for – the institute for – since 1984. And now you're about

to work for your seventh president. Do you know Joe Biden from previous experience? Have you worked with him before?

DR. FAUCI: Yes, I have had the privilege of working with President-elect Biden during his tenure for eight years as vice president. He was very much involved when we would have meetings in the Situation Room with President Obama during the flu crisis, during the Ebola crisis, during the Zika. So I have considerable interaction with him during those years.

MR. RUBENSTEIN: OK. So what is your new role going to be? You're still going to be the head of the infectious – Allergy and Infectious Disease Institute. But you have some additional role with him as well, is that correct?

DR. FAUCI: I do. He's made the title chief medical advisor, which means he's going to want me in – and we're already doing it in the transition – on the major discussions and decisions that have to do with COVID and other types of infectious disease challenges that we might face over the next years during his presidency.

MR. RUBENSTEIN: So what would you expect the average American citizen to see as a difference between one administration and the other in handling this, without getting into political issues? Is there something that the average person will see as a difference, or not really?

DR. FAUCI: No, I think you're going to see a difference because, as he himself has said, that President-elect Biden and Vice President-elect Harris are very much involved – literally almost in a hands-on way – in making sure that the country addresses this crisis we're in in a very serious way. He has a few objectives that he's already mentioned publicly. One is to get 100 million people vaccinated in the first 100 days, which means a million people per day. He wants everybody to wear a mask for at least 100 days, to show that wearing a mask can turn around the trajectory of the outbreak. So there are already a lot of things that he himself is very much involved in in encouraging the country to do to get over this terrible situation that we're in.

MR. RUBENSTEIN: When you wear a mask, is it useless to wear a mask if it doesn't cover your nose?

DR. FAUCI: Not useless but it's half as good because, you know, virus can enter into your nose.

MR. RUBENSTEIN: So how long should one use a mask before discarding it? Can you – you know, you use it for a day, or one time, or a week? Or how long is it safe?

DR. FAUCI: Well, you know, it depends – it depends, David, on the kind of mask. So let's – for example, this is a cloth mask. So I wear this. I take it off at night. I throw it into – I have a lot of these. [Laughs.] So I might throw it into the hamper to get – to get washed. The ones that are paper, some of them are washable, some of them you just throw out after you're finished, so.

MR. RUBENSTEIN: OK. So there's no particular mask you're recommending. There's no Tony Fauci recommended mask, right?

DR. FAUCI: [Laughs.] No, there's not.

MR. RUBENSTEIN: OK. So going forward, let's talk about a typical day. You and I, it was mentioned earlier before we went on, that you had already seen patients today. Why are you still seeing patients when you're solving the whole, you know, U.S. problem? How do you have time for patients?

DR. FAUCI: Well, you know, as I – as I mentioned to you many times before, David, my day over the past year now – it was – I would say I have not taken a day off since last January. And that's not hyperbole. It's just the case. My day's packed. You know, I get up at 5:00 and I go into work at 6:30, and I'm there till late, and then I come home and run. So today, for example – well, let me answer your specific question. I see patients, David, because my identity – my primary identity is as a physician. And that really informs and influences everything I do – my public health work, my basic scientific work, the kinds of things I do in response as a public health person to an outbreak, whether that's HIV/AIDS, or Ebola, or Zika, or in this case COVID-19.

Everything revolves back to my identity as a physician. So I don't ever want to lose that strong identity. So that's the reason why I continue and have been seeing patients literally from the time I got to the NIH decades and decades ago, because it really connects you with the reality of what you're dealing with. So when I start talking about the disease, what it can do – what you can do to prevent getting it, why vaccines are important, the very fact that you're dealing with a real human being who's suffering from the disease gives you a perspective that you can't get by reading about it. And I don't want to ever give that up.

MR. RUBENSTEIN: OK. So recently you had a birthday party. And at your birthday party did you have hundreds of people show up to thank you for what you're doing?

DR. FAUCI: [Laughs.] That would have violated all of the things that I have been telling the American public to do. No. My wife threw a surprise Zoom party for me. And, son of a gun, she does it every decade. She keeps surprising me. I thought now that no one would travel, and no one would be around that there's no chance in the world she's going to trick me this time. But she did. She got people who are my good friends, like you and many of the people that I've been involved with literally from all over the world. And when I walked into the house the only human being that was there was my wife. So there were two people in the house, but the screen was full of boxes of my friends that I've known over the years. So it was a very unusual birthday party, but it certainly was a surprise. And thank you for coming. [Laughs.]

MR. RUBENSTEIN: So your daughters, they didn't come home? You didn't want them to come home for your birthday party?

DR. FAUCI: No, David. I didn't want them to travel. They live in cities that would require a plane trip. And I've been telling people throughout the country to please avoid unnecessary travel. And I just wanted to live by what I've been telling the American people to do. So my daughters have not come home. The first time since their birth that they haven't spent my birthday with me.

MR. RUBENSTEIN: So do you expect to get any time off the next – this coming year – or this year. We're in this year already. Do you hope to get any time off this year?

DR. FAUCI: You know, David, I don't think I'm going to be putting that on my own radar screen until we get enough people vaccinated that the dynamics of this outbreak dramatically diminish. And when I say dramatically diminish, I mean have virtually little impact on our lives. And that's when I get to, what I said, that herd immunity level of anywhere from 70 to 85 percent of the people getting vaccinated. I don't think that's going to happen until the end of the summer, the beginning of the fall, if we do it correctly. So we're talking about some significant months to go before I can be able to sit back and say that, you know, take a rest for a while.

MR. RUBENSTEIN: Now, I'm sure you could retire tomorrow and go out and write a book for \$50 million or go on the speaking circuit for a million dollars a speech. You're not tempted to do that?

DR. FAUCI: No. I have a pretty important job now, David, which I'm going to do until we finish the job. What happens after that, who knows? But right now there's – the only thing that's tempting me is to get this outbreak over with.

MR. RUBENSTEIN: Have you thought that when you were a high school basketball star if you'd be a little taller you could have been an NBA player and really made something of your life, as opposed to doing what you're doing? Has that ever crossed your mind?

DR. FAUCI: Oh, to this day it pains me. [Laughs.]

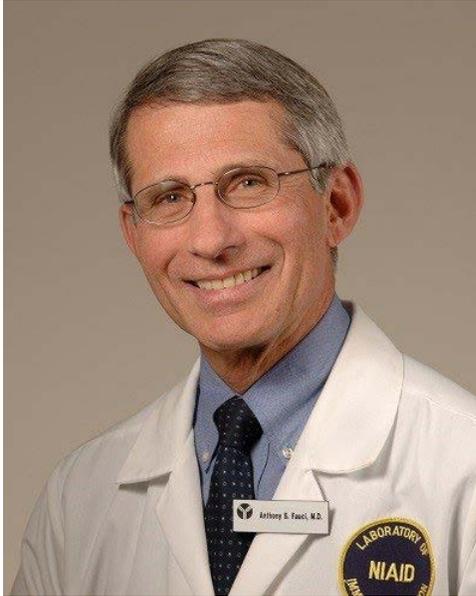
MR. RUBENSTEIN: So you were a guard. You were not good at dunking, I guess, right?

DR. FAUCI: I was not good at dunking. And I was a short point guard. [Laughs.]

MR. RUBENSTEIN: So, Tony, I want to thank you behalf of all Americans, and everybody that cares about this country and the health care situation we have. Obviously, you've worked tirelessly. And thank you for helping to get the vaccine available. And hopefully it will get distributed much more efficiently in the near future. And I hope you have continued good health. And thank you for your service to our country.

DR. FAUCI: David, thank you very much for having me. I really appreciate it. It's always a pleasure to be with you.

MR. RUBENSTEIN: Thank you. Bye.



Anthony S. Fauci, M.D.
Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health

Dr. Fauci was appointed director of NIAID in 1984. He oversees an extensive portfolio of basic and applied research to prevent, diagnose, and treat established infectious diseases such as HIV/AIDS, respiratory infections, diarrheal diseases, tuberculosis and malaria as well as emerging diseases such as Ebola and Zika. NIAID also supports research on transplantation and immune-related illnesses, including autoimmune disorders, asthma and allergies. The NIAID budget for fiscal year 2020 is an estimated \$5.9 billion.

Dr. Fauci has advised six presidents on HIV/AIDS and many other domestic and global health issues. He was one of the principal architects of the President's Emergency Plan for AIDS Relief (PEPFAR), a program that has saved millions of lives throughout the developing world.

Dr. Fauci also is the longtime chief of the Laboratory of Immunoregulation. He has made many contributions to basic and clinical research on the pathogenesis and treatment of immune-mediated and infectious diseases. He helped pioneer the field of human immunoregulation by making important basic scientific observations that underpin the current understanding of the regulation of the human immune response. In addition, Dr. Fauci is widely recognized for delineating the precise ways that immunosuppressive agents modulate the human immune response. He developed effective therapies for formerly fatal inflammatory and immune-mediated diseases such as polyarteritis nodosa, granulomatosis with polyangiitis (formerly Wegener's granulomatosis), and lymphomatoid granulomatosis. A 1985 Stanford University Arthritis Center Survey of the American Rheumatism Association membership ranked Dr. Fauci's work on the treatment of polyarteritis nodosa and granulomatosis with polyangiitis among the most important advances in patient management in rheumatology over the previous 20 years.

Dr. Fauci has made seminal contributions to the understanding of how HIV destroys the body's defenses leading to its susceptibility to deadly infections. Further, he has been instrumental in developing treatments that enable people with HIV to live long and active lives. He continues to devote much of his research to the immunopathogenic mechanisms of HIV infection and the scope of the body's immune responses to HIV.

In a 2019 analysis of Google Scholar citations, Dr. Fauci ranked as the 41st most highly cited researcher of all time. According to the Web of Science, he ranked 8th out of more than 2.2 million authors in the field of immunology by total citation count between 1980 and January 2019.

Dr. Fauci has delivered major lectures all over the world and is the recipient of numerous prestigious awards, including the Presidential Medal of Freedom (the highest honor given to a civilian by the President of the United States), the National Medal of Science, the George M. Kober Medal of the Association of American Physicians, the Mary Woodard Lasker Award for Public Service, the Albany Medical Center Prize in Medicine and Biomedical Research, the Robert Koch Gold Medal, the Prince Mahidol Award, and the Canada Gairdner Global Health Award. He also has received 45 honorary doctoral degrees from universities in the United States and abroad.

Dr. Fauci is a member of the National Academy of Sciences, the National Academy of Medicine, the American Academy of Arts and Sciences, and the American Philosophical Society, as well as other professional societies including the American College of Physicians, the American Society for Clinical Investigation, the Association of American Physicians, the Infectious Diseases Society of America, the American Association of Immunologists, and the American Academy of Allergy, Asthma & Immunology. He serves on the editorial boards of many scientific journals; as an editor of *Harrison's Principles of Internal Medicine*; and as author, coauthor, or editor of more than 1,300 scientific publications, including several textbooks.