Mark Masselli (00:04):

Well, our guest needs no introduction. He was our north star during COVID from its discovery to scientific guidance on how to avoid it, and there with us during the vaccine development that really put an end to the pandemic.

Dr. Anthony Fauci (00:21):

Unfortunately, what we're experiencing today in our country is that diversity has become divisiveness and that is something that I would hope when you look back at PEPFAR and see what can be done when people of diverse ideologies work together in a bipartisan way, you can do something that is historic in its impact. As you mentioned, 25 million lives saved over 20 years. That would not have happened if there was a degree of divisiveness, the likes of which we're seeing today.

Margaret Flinter (00:55):

Dr. Anthony Fauci has had a long, and it is an understatement to say distinguished career in medicine in service, in government service. We are so delighted to welcome him here today. We first knew Dr. Fauci because of his work in HIV in the 1980s, and then of course followed his worldwide work with PEPFAR. And most recently, over these past several very challenging years, his leadership and guidance in COVID was truly a gift to the country.

Dr. Anthony Fauci (01:24):

We only have less than 20% of the people in the country have taken that bivalent boost. That's not good if you really want to get a degree of immunity that you could lift up. So, what we're hoping is that as we get to this fall, which is a year later from the original BA.4/5, that if we can approach a 50% uptake, I think we'll be in really good shape.

Margaret Flinter (01:57):

Thank you for being here, Dr. Fauci.

Dr. Anthony Fauci (01:58):

Thank you. Good to be with you.

Mark Masselli (01:59):

Yeah, and welcome to Conversations in Healthcare in person.

Dr. Anthony Fauci (02:02):

Yes, indeed.

Mark Masselli (02:03):

And we just want to remind our audience, this is not a green screen, this is real. We might travel out there after to show people, but we're here to talk to you about PEPFAR because it's its 20th anniversary and really, I don't think the American public knows the magnitude of this impact. $100 billion dollars plus spent, 25 million lives saved. But it's been so consequential and you are main architect for that. I'm wondering if you could just take us back 20 years ago and maybe tell a little bit about the story.

Dr. Anthony Fauci (02:39):

Well actually, really it emanated from the fact that back in the mid-'90s, 1996 when after several years of incremental improvements in the treatment of persons with HIV in 1996 was really a transitional year, where with a drug called protease inhibitors, put in a combination of three, literally transformed the lives of persons with HIV in the United States and in the developed world that had accessibility to therapy, so that people who had an inevitable death sentence actually were coming out of hospice.

Mark Masselli (03:20):

Incredible.

Dr. Anthony Fauci (03:21):

... were getting jobs, were looking forward to what would be almost a normal lifespan. And that took place and got better and better with better drugs and less toxic drugs from 1996 to about 2000, 2001. What became obvious to some of us, myself included, but also importantly to President George W. Bush, was that we were essentially transforming the lives of individuals and in other parts of the world, particularly Southern Africa and the Caribbean and other regions that didn't have accessibility to these life-saving drugs, people were dying, like 95% mortality.

(04:05):

And the President tasked me, literally came in and called me to his office in the White House to the Oval Office and said, "We really got to do something about this. I want you to go to Africa and I want you to determine the feasibility of doing something that's transformative and accountable because," and these were his exact words, that he felt that we as a rich nation have a moral responsibility with all of our resources to not allow people in a different part of the world to die from a treatable disease just because of where they happened to be living and where they were born.

(04:48):

And he sent me there to put together a program. We didn't realize or know there were many people that were very skeptical. How can you get drugs and prevention in a developing region of the world where you have to take multiple pills multiple times per day? And that was, I think, an assumption that was Ill-founded in reality because when I went there and I saw what could be done, that's when I came back and presented it to the president that I think we can do this with this program.

(05:22):

And he said, "Well, go ahead and put it together and I promise you I'll support it." And I remember telling him, "But that's going to cost a lot of money." And his words were, "Let me worry about the money. Just put together the program."

(05:34):

So, it really shows how leadership from above, from somebody who was a compassionate conservative essentially gave me and others the task to go ahead and do something that has literally transformed the lives of part of a continent of Africa.

Mark Masselli (05:52):

Just speaking about the President Bush, we have an experience, as you know, for the last 50 years, we've been providing healthcare to people who live in poverty. And it was George Bush who came in and said, "Let's double the amount of community health centers there are in this country." Sort of came

out of the blue, but really came out of this deep compassion talk about conservative Americans like the President, who really connected the dots and said this was important.

Dr. Anthony Fauci (06:20):

Well, yeah, it was the president himself, the people around him, people who very few people have heard of that just made things happen. People like Josh Bolton who was the deputy chief of staff at the time, and Gary Edson and Margaret Spelling and people like that who helped me have the access to essentially literally open access to the president, which is a very unusual thing that someone could happen. And all along the way, we kept on fine-tuning it and fine-tuning it.

(06:52):

But the important issue that I think you're alluding to is that the diversity in our country of political ideology of conservative, center right, center, center left, progressive liberal is very healthy because we have a diverse country. And if those groups as different as they are ideologically work together in a common cause, amazing things can happen.

(07:21):

Unfortunately, what we're experiencing today in our country is that diversity has become divisiveness. And that is something that I would hope when you look back at PEPFAR and see what can be done when people of diverse ideologies work together in a bipartisan way, you can do something that is historic in its impact. As you mentioned, 25 million lives saved over 20 years, that would not have happened if there was a degree of divisiveness, the likes of which we're seeing today.

Mark Masselli (07:54):

Yeah, absolutely.

Margaret Flinter (07:56):

Well, Dr. Fauci, this is a story that I think needs to be told over and over. We're so glad to have you here to tell that story. You very justly earned the Presidential Medal of Freedom for your leadership on PEPFAR, which I think is in the category of few people accomplish that in the United States, and so congratulations always for that.

Dr. Anthony Fauci (08:16):

Thank you.

Margaret Flinter (08:17):

But when we look forward now, what is your sense of two things, the continued commitment to PEPFAR, because as you say, so much progress has been made, but we don't have a vaccine, we don't have a cure. So, what's that commitment? And when you look at the infrastructure that's developed in Africa, in the areas that you focused PEPFAR on, what do you see being sustained from the effort that you began so many years ago?

Dr. Anthony Fauci (08:43):

Great question. I think people should be aware that although this started in the Bush administration, which was a conservative, compassionate, conservative Republican administration, that was 20 years ago. And we've had multiple administrations since then. We've had multiple turnover of leadership in

the Senate and the House over that 20-year period. And the support and commitment for PEPFAR has been maintained and sustained. That really is very, very important that this country realizes with our leaders how important that particular initiative is.

(09:24):

And I hope, and I think it's going to happen, that we'll have the sustained continued commitment. It's one of the best things that this country has done, maybe the best thing that we've done in the arena of health, the largest program against any single disease in history. And it's already, the results are extraordinary. So, direct answer to your question is that it has been sustained with a lot of good support. And I would hope that that would be maintained.

(09:54):

The other part of your question is also important. It wasn't just saving lives by treating and preventing HIV, but it established in multiple countries and infrastructure that has been leveraged to address other diseases. And if you look at the PEPFAR infrastructure that has been built, it has had a positive impact on vaccinations for things like measles on maternal child health, on women's diseases like cervical cancer.

Margaret Flinter (10:27):

HPV.

Dr. Anthony Fauci (10:28):

I mean absolutely, President and Laura Bush made it another additional add-on program to PEPFAR to address another completely preventable disease. So, it's had multiple spinoffs that aren't just about HIV. So, that really is an interesting model. And in fact, some of the care and delivery of vaccinations in Southern Africa for COVID leveraged the PEPFAR infrastructure to do that. So, it has had impact well beyond HIV.

Margaret Flinter (11:04):

Great. And I would say not only the treatment, but the whole chain of outreach engagement addressing social service needs, what gave rise to the Ryan White legislation always attend to the social needs as well as the medical needs if you want to make a difference, really began with that initiative.

Dr. Anthony Fauci (11:22):

It did. It did.

Mark Masselli (11:22):

I was thinking about the force multiplier, even though it's a small amount of money over a very large budget, we're here at the Aspen Institute's Ideas and Health Gathering, and we have this opportunity to sit around with Former Secretary Azar, Secretary Sebelius, and the current Secretary Becerra, and they were saying, what's one of these values of the work that they do at HHS? He said, the impact on us in terms of a global leadership when a lot of times people aren't welcoming Americans in, they're embracing when NIH comes in, that it has such a profound impact around the globe in terms of our status.

(12:13):

And so, it sounds like a lot of money, but against our budget, it's sort of a very small percentage.

Dr. Anthony Fauci (12:20):

It's a fraction of a percent our global health initiatives, a fraction.

Mark Masselli (12:24):

But talk about that. You have been one of captains of that engagement with countries all over the globe about how they embrace Americans, how they look at Americans in a different way.

Dr. Anthony Fauci (12:37):

Yeah, I think if the rest of the country was fully appreciative of what a program like PEPFAR and to some extent, the President's malaria initiative, also what that has done for how the rest of the lower and middle income country world looks at Americans throughout the world, we are often not the most popular people. I think that's pretty, pretty clear.

(13:06):

When you go to Africa. I've had experiences of people just because I'm an American, not necessarily because I'm Tony Fauci, but because I'm an American who come up to you and they look at you and say, "Oh, you're an American. You were the ones that brought PEPFAR that saved our village, or that saved my wife or my children or my parents." It's the best form of soft diplomacy you could ever imagine how people really, really appreciate. China can come and build their roads and their railroads and their highways, which is fine, but when you save somebody's child from dying, they don't forget that.

Mark Masselli (13:50):

That's right.

Dr. Anthony Fauci (13:50):

They don't forget that.

Margaret Flinter (13:52):

We heard that message loud and clear yesterday, I think from some of our colleagues at CDC talking about we have this enormous core of people all over the world that when they speak, people know there's speaking about caring for their families and their health, and that is a huge form of, as you say, soft diplomacy and a great gift. But when we have to ask, of course, with all that you did with PEPFAR, with HIV in the United States before that, how did it prepare you to respond when COVID, something that perhaps you expected, but I think most of us never saw it coming.

Dr. Anthony Fauci (14:25):

Yeah.

Margaret Flinter (14:26):

When that came, how did all of those lessons and infrastructure lead you to be able to intervene in the ways that you did and to lead us through that?

Dr. Anthony Fauci (14:35):

Well, the answer to your first part of your question is that for decades in my lecturing, people would always ask, "What is your worst nightmare?" And my answer on record, go back, check it out online-

Margaret Flinter (14:51):

We will.

Dr. Anthony Fauci (14:52):

... has been the emergence of a brand new respiratory infection that's highly transmissible with a high degree of morbidity, mortality that jumps species from an animal reservoir to a human. And unfortunately, the last three and a half years, we've been living my worst nightmare. So, although we were felt to have been prepared, there were certain aspects of preparation that we did not do very well.

(15:20):

I tend to try and explain it, and this gets to your second part of your question about what the work we did with HIV and the input we did in the investment in science that led to the early development of one drug, then two drug, then combinations of drugs, the sustained commitment and investment in basic and biomedical research is something we should never forget.

(15:45):

If you look at COVID, you can divide preparedness and response into two major buckets. One is the scientific bucket and the other is the public health bucket. The scientific response and preparation was a resounding success. If you look at the fact that the virus was recognized with the sequence put in a public database on January 9th, literally a few days later because of preparation, we had done for decades before with platform technology, with the mRNA vaccine, with imaging design, with structure-based vaccine design, we began the development of a vaccine within days.

(16:28):

Within 65 days, we had a phase one trial. Within 120 days, we had a phase two trial. And at the end of 11 months, we had a highly effective and safe vaccine going into the arms of individuals, which without hyperbole is beyond unprecedented.

Margaret Flinter (16:48):

Absolutely.

Dr. Anthony Fauci (16:48):

This would've taken several years. So, the success of the scientific investment was clear. What we need to do better on was the public health preparedness. It was a bit different from HIV because it's a respiratory disease in which everybody in the world is vulnerable. It has nothing to do with your behavior. If you go into an elevator or a subway or in a room or a dinner, then you could get infected. So, it had that major difference.

(17:17):

But the public health infrastructure throughout the world, and particularly in the United States, it's shown a bright light on the inadequacy of the connection between the delivery of healthcare and the public health enterprise. I mean, the lack of availability of data in real time. What is the prevalence of the infection? What is the variant that's out there? What is the resistance to it? What are the monoclonal antibodies doing? We were disconnected in this country. And that's because of the fractionation of the healthcare delivery system. So, if ever there was a lesson learned about next time, we've got to do much better.

(17:57):

And other countries, for example, the UK, some of the countries in the European Union, Israel, South Africa, where there was a firm connection between the delivery of health and the public health enterprise, they had a very good grasp in real time what was going on. We've got to do better than that.

(18:18):

The other lesson learned is what we alluded to a little bit ago is that if ever there was an inopportune time to have an outbreak of this proportion, historic proportion is when we were going through a profound degree of divisiveness in our society In an election year. I mean, you couldn't make it up. What a bad circumstance.

Margaret Flinter (18:43):

And pathogens don't care about politics.

Dr. Anthony Fauci (18:46):

We had a common enemy, which was the virus. And instead of coming together to fight the common enemy, we were fighting with each other. And that is a very bad recipe for a disaster, and we could have done much better.

Mark Masselli (19:00):

Yeah. We saw that on the ground, but we also saw some remarkable things. We happened to run a statewide health program for uninsured, and the governor turned to us and said, will you run our four mass vacc sites, which is kind of interesting because we had never run a mass vacc sites. Seven days, we set one up and ended up in a year seeing 830,000 people for vaccination and testing.

Dr. Anthony Fauci (19:24):

And testing.

Mark Masselli (19:25):

But here's the good news is that we didn't know what we were doing, but there were so many people who came out in America and certainly in our part of the world, retired physicians, retired nurses who came up and said, "I want to help." There's a great seam of opportunity for us to find things that bind us together. And I think when people were down and out at the national level, there was all sorts of divisiveness going on. But I know you know of so many stories of where people came together. National Guard showed up, just on their own. You had all of these, the fire department was there across America.

(20:04):

And I think we've got to figure out how do we get back to that sort of common shared space where values that are fundamental to a fair and just society are shared by more than that. What do you think the road back to trying to get to, because there were those moments you witnessed them around the country.

Dr. Anthony Fauci (20:23):

Yeah, of course. Yeah. I mean, I think we just need to examine what we've been through. Despite the divisiveness, I still think that we can out into the better angels in society and get people to put aside those kinds of differences, which really are antithetical to what you're talking about because the people in this country are good people.

Mark Masselli (20:49):

Absolutely.

Dr. Anthony Fauci (20:49):

I mean, they want to do the right thing. And they have come from different backgrounds and there's a lot of diversity. It's an amazing country and we are very proud of it. It's diverse geographically. It's diverse economically. It's diverse racially and ethically. It's diverse in so many different ways, but coming together for a common purpose, there's nothing like the United States of America. So, we've got to recapture that.

Mark Masselli (21:17):

Anywhere that you've seen that people are trying to build those alliances across lines like you did with President Bush and others who were in the conservative movement came forward. Anything that you see that might give people a sense of hope?

Dr. Anthony Fauci (21:31):

Yeah, just look at what happened. I mean, right now, there's this, like I mentioned, this divisiveness a far extreme that just divided from the people on the other side. Remember, George W. Bush was a compassionate, conservative and a Republican. So, right now, this idea that the Republicans are way, way, way on this side and a very, very extreme, no, I mean some of them are, but there are a lot of really, really fine people. If you just go back and look at the people I dealt with in the Republican Party when George W. Bush was president, I mean, we got a lot of things done.

Mark Masselli (22:10):

That's right. That's right.

Margaret Flinter (22:12):

Well, there are a lot of sustained changes that have happened because of it, and I think one that we maybe don't talk about enough is what happened within healthcare to take public health and primary care and bring them together much more strongly. The public health infrastructure, certainly in New England and I think in many parts of the country, was not able to launch the kind of primary care response that we needed to see all of those patients to counsel patients, to educate them, talk about why they needed the vaccine, care for them when they got sick, get them PAXLOVID if they qualify for it.

(22:44):

And I think we saw a renewed interest in the part of certainly our clinical colleagues to be much more engaged in public health. Is that something that you've seen as well? Do you see much more of a joining of public health and primary care as a continuum?

Dr. Anthony Fauci (22:58):

Absolutely I see it, and we have to do much more of it because that's really the solution to some of the issues that we're facing. Absolutely.

Mark Masselli (23:06):

The Warp Speed investment that the government made was just incredible. We were talking to the ARPA-H people just who seemed to have maybe the resources to go out there and explore and make the investments in that maybe talk a little bit about both the ability that you had because you had the resources and then maybe a little bit about ARPA-H and how they may also benefit from some of the lessons learned.

Dr. Anthony Fauci (23:34):

So, two things. Operation Warp Speed, an example of what amazing things can be done when you put an investment of resources in it with a good purpose and you have a good plan. So, I mentioned the scientific unprecedented accomplishment of a vaccine that goes from a sequence in January to a vaccine in end of November, like unbelievable.

Margaret Flinter (24:03):

Which we gave on Christmas Day in December of that year.

Dr. Anthony Fauci (24:06):

So, that's the scientific component, but there's an implementation component of that. How do you get vaccines produced to be available at that 11-month period? Because the standard way of developing a vaccine is you develop it, it takes months, a year. You do a phase one study, takes another year, a year and a half. You do a phase two study, takes another year, a year and a half. You do a phase three study, and you don't start manufacturing the vaccine at scale until you are certain that it works and that it's safe.

(24:44):

The philosophy behind Operation Warp Speed is that we are going to take, the government is going to take the risk away from the company. We're going to say we have a vaccine that we think is going to work, start manufacturing hundreds of millions of doses now, even though we don't know it works. So, at the time we were doing the phase one and the phase two trial, the companies were making the vaccine. If the vaccine did not work, we would've lost hundreds of millions of dollars. But if the vaccine did work, which it did, we saved years.

Mark Masselli (25:22):

And millions of lives.

Margaret Flinter (25:23):

And millions of lives.

Dr. Anthony Fauci (25:23):

And millions of lives. So, that was the beauty of Operation Warp Speed. And a lot of credit really is deserved by Alex Azar when he was the secretary of HHS and people at the FDA like Peter Marks and those people, those were the ones that really conceived of and made that happen. My group did the scientific part, but the actual implementation was done at the level of a lot of people. But Alex and the FDA did a great job.

(25:56):

When you talk about ARPA-H, ARPA-H really is a DARPA version of health. So, it really is doing something that's a very high risk, but a very high reward. And that was the concept of getting an investment first of 1 billion and then 1.5 billion to put it into ARPA-H to go after really high impact discoveries that if it doesn't look like it's working, then drop it. Even though you lose money, because that's how DARPA works. DARPA either hit a home run of double and a single is no good.

Mark Masselli (26:33):

That's right.

Dr. Anthony Fauci (26:33):

Yeah, you hit a home run, that's what they want.

Margaret Flinter (26:35):

DARPA's baseball analogy.

Dr. Anthony Fauci (26:36):

Exactly.

Mark Masselli (26:38):

But that's a different model certainly than healthcare, worked on the defense side, but this will a cultural challenge within?

Dr. Anthony Fauci (26:45):

I think so, but it's not going to replace the standard way of doing research.

Mark Masselli (26:48):

Absolutely.

Dr. Anthony Fauci (26:49):

I mean, the investment in the NIH, the long-term, years-long, decades-long investment is absolutely essential for getting the kind of advances that we've gotten over decades and decades. But that other twist to it, the upper H twist is just that added extra dimension.

Mark Masselli (27:08):

Yeah, I mean it's very exciting. The sort of program managers acting as investment, no different than a big hedge fund would say, "Hey, either give me a great delivery or you're out of here." So, it's going to be important to watch early on in its development. So, we're excited about it.

Margaret Flinter (27:26):

We are, and we're also on this beautiful early day of summer thinking about fall and what comes next in this phase. We know in the primary care offices, people will be having conversations about RSV for their seniors. That's a conversation that's going to be had, but we're still going to need to have the conversation about COVID, COVID vaccines and from the days when we had six lines of traffic lined up to get their immunization against COVID, obviously that has waned terribly far down, but this fall seems

like the opportune time to again bring it up. The primary care offices have it, the public health departments have it.

(28:04):

What do you think we're going to see with people this fall? Are they going to accept that this is normal business going forward?

Dr. Anthony Fauci (28:10):

Yeah, so what I think is going to happen is that you mentioned two separate things, so let's take one at a time. RSV has a really major scientific breakthrough of getting a really good vaccine against RSV, a vaccine not only for the elderly and for the young, but a vaccine that you would give to pregnant women, who would then give by transplacental passage of antibody to the newborn and protect them. RSV is a serious disease potentially both for the very young as well as the elderly. So, you're going to see the incorporation into the vaccine profile RSV. I know I'm going to get an RSV vaccine my age. I can tell you that much.

(28:48):

The other thing is how do we address COVID, which right now, if you look at the prevailing variant that's out there, it's a sublineages of Omicron. We had multiple variants from the wild type original Wuhan strain. The first one of which in this country was the Washington strain, which is somebody who visited from Wuhan. Then you had alpha, beta, gamma, and then you had a big a peak with Delta. And then in Thanksgiving of 2021, I know because my Thanksgiving Day was spent on the phone with South Africa, we had Omicron, and Omicron was a big, big difference from them.

(29:31):

And ever since we had the first Omicron, we've had sublineages. We're now at an XBB 0.1.16. Okay. So, when we're going to be making the booster that we hope could be incorporated so that people will regularly get their flu shot and get their COVID shot, it's going to be an Omicron variant, which very likely will cover the circulating variants that we have right now.

(30:04):

If you look at the uptake of flu vaccine on a countrywide basis, it's about 40 to 50% of uptake of all ages. If we could do that with COVID, that would be a huge success. So, what we're hoping is that people who come in with the uptake of a flu vaccine would also come in and do at the same time, the same day COVID, because remember we put out there in September of 2022, September, October, September-August to be a 4/5 bivalent. The new vaccine is not going to be a bivalent, it's going to be a monovalent Omicron derivative.

(30:48):

We only have less than 20% of the people in the country have that bivalent booster. That's not good if you really want to get a degree of immunity that you could lift up. So, what we're hoping is that as we get to this fall, which a year later from the original BA.4/5, that if we can approach a 50% uptake, I think would be in really good shape.

Margaret Flinter (31:12):

Well, that's going to take a huge national campaign. We're not hearing as much about that yet. I think maybe there's a reluctance to push it out.

Dr. Anthony Fauci (31:19):

It's June. I hope-

Margaret Flinter (31:21):

From our point of view, that means flu season's right around the corner.

Dr. Anthony Fauci (31:24):

Exactly. So, I think as we get into July, right after the 4th of July, we got to start, that's when you start looking at the fall. You're already into the summer, I think we need to beef up that campaign.

Mark Masselli (31:35):

We were blessed to have you on the podcast five times during the pandemic, but I remember the first time in mid-February you came on and there were a couple of things that you said that put the hair back of my neck on end. One was just as a reminder, coronavirus is a mutating thing and it will continue to change. And the other thing you said, because we sort of asked, do you think it's here in America, and you just reminded us there are 20,000 Chinese a day who come to America by flight.

(32:05):

And so, two things. One, just we're going to be living with something that's a mutation that we're not used to in having to deal with that. And we're spaceship earth, we're connected, and we can't maybe going back to the whole investments that we need to make, we need to have this relationship around the world. And I guess the question is around China, of how we can improve upon the communication that seems to be lacking, that you had great relationships or the department had great relationships there because scientists believe in having a global community work on it.

(32:43):

So, maybe sort of one reminding us this is going to be with us for a while, but also this interconnectedness that we have to be keeping our eyes on.

Dr. Anthony Fauci (32:52):

Yeah. The situation right now with the enmity that we have towards China is very counterproductive. The more we make accusations and the more we push against them, the more they pull back. And in order to be able to have the kind of broad global surveillance, global cooperation, global collaboration, you've got to have a relationship the way we had before COVID, which was a relationship of exchange of scientific information supporting each other. And a lot of very good science has come out of China, particularly in the field of infectious diseases, but other diseases. We've had collaborations with the Chinese for decades and decades. Now, if you ask somebody, it looks like we're at war with them, which is really very nonproductive.

Mark Masselli (33:44):

Secretary Blinken was there meeting with Foreign Secretary Gang and certainly, the issues about where we can find common ground, they were talking about defense, which is very important. But it seems that healthcare is important when, what's the status of independent conversations going on?

Dr. Anthony Fauci (34:04):

Not a lot.

Mark Masselli (34:05):

Not a lot?

Dr. Anthony Fauci (34:05):

Not a lot. And that's unfortunate. We've got to get away from the confrontative relationship, and it's both sides. I mean, the Chinese have been very obtuse and very secretive, and they get very defensive when it comes to health. Even when they have nothing to hide, they act like they have something, and that's a bad formula.

Mark Masselli (34:29):

Just thinking about the seminal work you did in AIDS, how far we've come, not a cure, but people who are living healthy and long lives with treatment-

Dr. Anthony Fauci (34:39):

Not only long, but almost normal life expectancy, maybe a year or two less.

Mark Masselli (34:44):

Is there any trajectory you think on COVID or it's a different type of-

Dr. Anthony Fauci (34:48):

Well, it's a totally different type of disease. We don't have a vaccine for HIV, so we can prevent by preexposure prophylaxis. We have a lot of good prep. We used to have a pill a day. Now you have an injection you can give every two to six months, so we can prevent disease. But for those who unfortunately get infected, the treatment is spectacularly good, really, really, really good. That's totally different from COVID. COVID, we have a vaccine that works. Now, it may not prevent you from getting initially infected because it's a very transmissible virus, but it is very good that preventing you from getting severe disease.

(35:27):

So, we have to combine vaccination with better antivirals because the people who get into trouble are not the young healthy 30-year-old man or woman who have no other underlying diseases, they get vaccinated, which they should and kept up on their boosts. They get infected, it's likely they will have minimal symptomatology or maybe just a typical cold. When you have vulnerable people, the elderly, those with underlying conditions, those who are immune compromised iatrogenically because of treatment of autoimmune disease or cancer, those are the ones that you have to have vaccine plus good antivirals.

(36:06):

We have a really good antiviral with PAXLOVID. The efficacy of PAXLOVID in preventing severe disease leading to death is very high, 85, 90% or more. But we need to do better. We need a whole pharmacy of antivirals for people.

Mark Masselli (36:25):

What's the work like on long COVID and-

Dr. Anthony Fauci (36:28):

Well, it's still somewhat of a perplexing problem that we don't really fully understand the pathogenesis of it. It's a real phenomenon. It varies in its severity from fatigue based on exercise to incapacity to be able to do something and a variety of other signs and symptoms, autonomic nervous systems, symptoms, unexplained tachycardia, temperature dysregulation, sleep disturbances, brain fog or inability to concentrate. It varies. I mean, for some people who have all of that and are really, really, their lives have been really negatively impacted to those who get a degree of fatigue that lasts for four or five, six months and then gets better.

(37:13):

So, it's a wide spectrum. The problem is we don't know what the underlying pathogenesis is, is that a triggering of an aberrant immune response that you can't turn off? Is it residual viral particles that are not replication competent but are still there? We don't know what the answer to that is.

Margaret Flinter (37:34):

Dr. Fauci, you are so much on the edge of the sea of science and clinical knowledge in such important areas, but I know you're also thinking at this moment about the future writ large who's going to be this healthcare workforce, who are going to be our public health, our scientist experts, and I know you're very engaged with the next generation and generations behind that coming up. Tell us what you're doing looking forward to doing, to really stimulate that same obvious love and passion for the science and the humanitarian aspects of healthcare.

Dr. Anthony Fauci (38:08):

Well, I asked myself a question after being the director of the institute for 38 years and being at the NIH for 54 years, over half a century of that, what can I have to do to continue to make contributions to society in a different form than being a government employee? And I'm asking myself, do I want to do more experiments in the lab? Do I want to do more clinical trials? This is important as they are. I've actually done that and I've trained hundreds of people over the decades to do that very well now.

(38:43):

So, I'm asking myself, what can I do? And I say, well, what do I have to offer with all of my experience, particularly the fact that I've had the privilege of advising seven presidents, and I understand the global health and the public health system that I could serve as an inspiration for younger individuals to get involved in science, to get involved in public health and to get involved perhaps in public service. And I can do that by lecturing, by teaching, by writing, by doing, what we're doing right here. That's really what I'm going to be doing with the main theme of aiming what I say and do at the younger generation.

Mark Masselli (39:24):

Well, and that's so important. And the issue of diversity is so important. You've been at the forefront of that. You work in AIDS, PEPFAR for sure, and the COVID pandemic. We had the president of Morehouse on the other day and he noted that when he got his degree there were 3% black physicians and 40 years, 50 years later, there are 5%. We really haven't made that type of progress and diversity. I know this is a big important issue for you. What strategies can we employ? Certainly, it's having mentors and teachers who inspire people, but we just need to do better.

Dr. Anthony Fauci (40:04):

You've got to train a younger generation of minorities and you've got to give them the opportunity of mentorship because you begin a process that's self-fulfilling. Because if you train a cadre of young

people who could serve as role models for the next group, they will then train the next group. You got to get the machine going. If you don't have enough people who are being the mentors for the other next generation, you're not going to get beyond that 3 to 5%.

(40:36):

So, that's what we're trying to do. We're trying to cultivate getting individuals in a broad variety of diversity into the system. Train them, give them the opportunity. And when you give them the opportunity, they're as good as anybody else.

Mark Masselli (40:50):

That's right.

Dr. Anthony Fauci (40:51):

The fact that they're not as nonsense, they are.

Mark Masselli (40:53):

And Margaret, I know we've been concerned about the science data that is out there around diverse populations in the All of Us program and how we've tried to think about that.

Margaret Flinter (41:03):

Certainly, in all of our research efforts. The goal is to bring in people who as Francis, Collins so brilliantly said, are like all of us. And that's been a great success in that kind of research. We've talked to the ARPA folks about this as well, looking for research ideas and research, not just from the usual players, our best academic institutions, but looking at community participatory research, reaching out into communities where diverse populations are represented is really huge. And I wanted to, if we have time, get in a question about the workforce. Again, I know you live in an interprofessional household.

Dr. Anthony Fauci (41:39):

Yes.

Margaret Flinter (41:39):

I had the opportunity, I was at the American Academy of Nursing Ceremonies last year with you and your wife, I think on Zoom at that point, which was just wonderful. The comments from both, but again, in the long arc of progress that we like to see, how do you think we've done at really being much more inclusive around all the health professions and stimulating that collaborative work, that teamwork, whether it's in the hospital or public health, the science labs, what's your kind of future gaze?

Dr. Anthony Fauci (42:08):

I think we've done a pretty good job. I mean, if you look at what things were like when I got into medicine, I entered medical school in 1962 when I graduated in 1966. It's a long time ago. The situation now has been much more inclusive and it really is better. There were people who think that when you reach out to try and make it more inclusive, you're going to diminish the quality, which is absolute nonsense that when it represents society, it is much, much better.

Mark Masselli (42:41):

And we see that here at the Aspen Institute. The diversity of people here, I think it's trying to find places where we can talk together to each other and break bread. We asked you when we last met maybe in December, if there's a book in your future.

Dr. Anthony Fauci (43:00):

There is, yeah.

Mark Masselli (43:00):

Can tell us anything you want to announce?

Dr. Anthony Fauci (43:03):

It is an announcement. Even before I stepped down, I had been working on a memoir, which is part of the process of trying to inspire young people to talk about my history from the time I got into medicine and science and public health. And it's a long history. It goes way, way back. And it's been involved. I've been fortunate enough, as I mentioned, to have done this for multiple decades. I've advised seven presidents. The book ends of my career, interestingly, by circumstance alone, is HIV in the beginning of my career and COVID at the end of my career. So, I think there's a story there, which I'm working on in a memoir.

Mark Masselli (43:42):

And when might we ... Because your publisher is probably asking you this.

Dr. Anthony Fauci (43:47):

My publisher has not asked this. I want to get a full manuscript out by the end of the year to the publisher. And then, it will take an additional four months or five months to actually get it processed. So, I'm hoping that we get it out by the first half of 2024.

Mark Masselli (44:05):

Well, that's great.

Margaret Flinter (44:06):

Well, it is a story that will be riveting to people. It's a story that needs to be told. And on behalf of Conversations on Healthcare, on behalf of the country, we want to thank you for all of your service, all of your incredible work, and for being a guest on Conversations on Healthcare. Thank you for joining us today at Aspen Ideas Health.

Dr. Anthony Fauci (44:26):

Thank you. My pleasure.

Mark Masselli (44:27):

Yeah, that's great. Good to see you.

Dr. Anthony Fauci (44:28):

Take care.

Mark Masselli (44:30):

Thanks so much.

Margaret Flinter (44:35):

Thank you so much.