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

This week, Mark and Margaret, take a look at the second tumultuous year of the pandemic. If 2020 was the year of COVID-19, 2021 was the year of the vaccine, a dramatic achievement of its development and deployment of first sense that things might be rounding a corner, then the arrival of Delta and the Omicron variants and how that has dramatically changed the landscape.

We revisit some of our memorable guests from the past year from renowned Virologist and Vaccine Expert Dr. Paul Offit, to Epidemiologist Michael Osterholm, to CDC Director Rochelle Walensky, NIH Director Francis Collins. The pandemic wasn't the only story to tell, climate change moved to the front burner, and women's reproductive health fell under serious threat, and still the pandemic rages on.

If you have comments, please e-mail us at chcradio@chc1.com, or find us on Facebook, Twitter, or wherever you listen to podcasts. Now, stay tuned to our look back at 2021 here on Conversations on Health Care.

Mark Masselli: Welcome to Conversations on Health Care I'm Mark Masselli.

Margaret Flinter: And I am Margaret Flinter.

Mark Masselli: Well, Margaret, another pandemic year and what a year it was, still we are far done from this experience. COVID-19 really has shocked the world into submission in 2020. 2021 taught us the meaning of perseverance and patience and trust in our scientific community. The year began with the promise of a remarkable vaccine for the Coronavirus.

Margaret Flinter: Well, that's right, Mark 2021. Even the last weeks of 2020 were a hopeful note. We had the rapid development and now deployment of the mRNA vaccine. It felt like the first real sign that there might be an end game for this pandemic. But the science needed some explaining back then and the country needed that. We had vaccine expert Dr. Paul Offit join us just to do that. There are a lot of rumors circulating around the new vaccine. You'll remember there were concerns that would alter people's DNA, and he came on the show and clearly dispelled that myth.

Dr. Paul Offit: The Messenger RNA is in this little lipid droplet which is then taken up into the cell in the cytoplasm. In order for it to enter the nucleus, it

needs to get past the nuclear membrane, which means it needs an access signal which it doesn't have. Therefore, it actually cannot possibly enter the nucleus. Even if it entered the nucleus, it's RNA, it's not DNA, it would have to be reverse transcribed to be RNA. Even if it was reverse transcribed to DNA, it would have to be integrated into the DNA which requires an enzyme called integrase, which it also doesn't have. It's not like the chances that it could affect our DNA are small, the chances that it could affect our DNA is zero. You are more likely to develop x-ray vision after getting this vaccine and having your DNA altered.

Mark Masselli: That early excitement around the vaccine, I think it's fair to say we experienced it ourselves here at the health center. We had our whole team of folks working at four mass vaccination sites serving the whole state of Connecticut, more than half a million vaccines into people's arms. We were, I think, driven by the same passion that we have that health care should be available to everyone and our real focus in on trying to bring this pandemic to an end. But we're also motivated by what scientist were telling us back in February renowned virus scientist Dr. William Haseltine warned that COVID was a shapeshifter that Coronavirus mutates, and that variants were a real threat.

Dr. William Haseltine: Now that we know we're starting to look, and the more we look the more we find. It isn't the same kind of changes in one part of the world or another. We're starting to find new variants that don't look very much like any other variants. The California variant that just popped up is not like the South Africa and the UK. People say it's going to be a race between vaccine, public health measures, tamp this down, put it in a bottle, but you asked me are these good escaped vaccines? The answer is UK virus does so weakly, South African and Brazilian viruses do it pretty well with a caveat. I'm going to predict that as the antibody concentrations wane, those differences between the ability that protect the variant is going to become greater and greater and greater to the point where you'll have no protection at all. I think that because these variants are reinfecting the same people that were already infected, where 76% of people that already been infected, there's a brand new wave of infection.

Margaret Flinter: We had another amazing epidemiologists join us on the show in March, Dr. Michael Osterholm, who I think the country gets to know very well during the pandemic as a reliable expert, spoke often on the media, also served done President Biden's COVID Advisory Team. He warned us that another surge was coming, and it was coming due to the new variants, even though vaccinations were rolling out and we're having a good response around the country. Of course, it turned out that he was absolutely right.

Dr. Osterholm: If you want to find out what is likely to happen here in the United

States, just look at Europe. Germany just put in place a new major lockdown initiative just because of the challenges there. I could go through country by country. Where this B 117 variant has taken off, the case numbers have surged substantially. Remember, in the United States, even with everyone who has been previously infected, and with even the amount of vaccine we've rolled out, we still have roughly 50 to 55% of the population unprotected. For all the pain, suffering, deaths and cases we've had in the past year, we still have at least an equal amount, if not more of people who are still vulnerable to this virus, so we have to take it very seriously.

Mark Masselli: Well, one thing that happened in the new year, Margaret, was we had a new administration, the Biden Administration took the task of vaccinating all Americans very seriously, mobilizing enormous. You might well say a herculean effort. His White House Vaccination Chief Bechara Choucair joined us in April talking about the dramatic uptick in vaccine rates under the Biden team in just a few weeks from when they took over

Bechara Choucair: 11 weeks ago the US was averaging less than one million vaccinations per day. Our current seven day average is over three million vaccinations per day. This weekend, we've reported for the very first time ever, four million shots reported administered in one day. For people 65 and older where we know 80% of the deaths from COVID is happening, more than 75% of people as 65 and older have had at least one shot of the vaccine. That's up from 8% 11 weeks ago.

Margaret Flinter: In the middle of all that effort, Mark, United States the place where much of the basic science and R&D for these vaccines have been done, had a new epidemic brewing. It's really different than anything I have seen in my long career and that was an epidemic of disinformation. That epidemic led to a lot of resistance to the vaccine in pockets across the country.

We had former CDC Director, Dr. Tom Frieden joined us in May. He talked about his work at the Global Health Entity Vital Strategies. They're actually researching not just basic science, but an in-depth analysis into what was leading to so much resistance. It did appear to be particularly among conservative voters.

Dr. Tom Frieden: But with the group of Trump voters that Frank Luntz and the Obama Foundation put together, it was really interesting to hear the extent to which they feel so alienated from the health --- the political system. They didn't want to hear about vaccines from any politician, not even from President Trump of whom they think very highly. They want to hear about it from doctors. There were certain messages that really resonated with them.

There's a lot of concern about vaccines, people think I'm putting this

foreign substance into my body, and why was it developed so quickly? There were some messages that really did make a difference. One of them was that if you get the virus, it's going to spread all over your body in billions of copies for a week or 10 days. If you get the vaccine, it'll be in your body for a day or so and then it'll be gone. It will save your body the trouble of getting infected to learn how to fight the virus. We also had to clarify that the mRNA vaccines were not rushed to the market, they moved quickly, but not rushed. This is 20 years of research. It's also really important to make the point that nearly every doctor who gets offered the vaccine takes it. This made a big impact on them because they trust their doctors.

Mark Masselli: Margaret, we've had so many CDC directors on and they really informed us and our listeners over the years and we have the new CDC director joining us just a few weeks later, Dr. Rochelle Walensky. She shared her thoughts on the effectiveness of the vaccine against the first wave of COVID, as well as the next wave that was being driven by the variants. Even then in early spring, they were laying the groundwork for the possible need for a booster.

Dr. Walensky: Among the things that we're looking at, not just in the trial, but really in the real world studies as well is what happens to our immunity, does it wane over time? I want to be very clear to people, when we talk about boosters that doesn't mean you're not protected now because that has caused some confusion. The question is not do we need a third today, you are --- if you get your two doses, you're protected. What we want to see is if in a year from now you will continue to be protected.

We're looking at those data, not just in the trial, but in clinical studies as well. Where we're worried most about that to start is among the population that got vaccinated first, of course, and that's our long term care facilities where people might not have had a robust immune response to start. We really want to make sure that they're going to maintain protection.

Margaret Flinter: At the same time, and I'm going to go back to 2020 for a moment. The country was really gripped by, once again, the revealing of just what tremendous health disparities exist in our country and when it comes to really caring in an equitable and quality way for racial and ethnic minority groups. We saw this as the mortality and morbidity rates made obvious that minority groups people of color were more likely to get sick from COVID, they were more likely to die from COVID. We had our guest, Dr. Elena Rios, President of the National Hispanic Medical Association on. She said, you know, this pandemic just exposed what was already there challenges that these communities have historically faced, and were continuing to face during the COVID pandemic, very powerful.

Dr. Elena Rios: Overall, Hispanics and other vulnerable communities have really had twice as many deaths than the white population. A lot of that is because of the underlying conditions that Hispanics who are mostly lower income working class people, known as essential workers, have lots of underlying conditions like diabetes and obesity and heart disease and cancers and also our living in multigenerational housing with --- in small --- working in small businesses or in the service industry or in the agriculture business are meatpacking plants, etc, where they've lost jobs and are really feeling the impact, the economic impact of COVID-19 as well as the physical and emotional impact of this horrible pandemic.

Mark Masselli: Yeah, she really was a powerful voice and really shined a light on the health disparities inequities that exist out there. We were fortunate to have former Congressman Patrick Kennedy on, who is a renowned mental health advocate told us about the isolation and fear and quarantines. Margaret, we saw this in our own settings, our school based health centers, the impact that COVID the isolation that it was creating, not only on the mental health, but addiction and increased overdoses, and suicides. Patrick told us this was just the kind of glaring spotlight needed to spur change in how we treat mental illness and addiction in this country. Hopefully, that will be an impetus for the type of change that's needed.

Patrick Kennedy: We as a nation have just really never wrapped our arms around how much of an elephant this is in our nation's living room. I think that both on a personal level and on a societal level we're ready to have that conversation. To your point, the indicators are off the charts. I mean, we're losing twice as many people as we lost during the height of the HIV/AIDS crisis, and we're spending one fifth the amount of money as we dedicated to fight HIV/AIDS. We may think, because of all the headlines that we're actually tackling mental health and addiction, and I can tell you as a member of many who are on the frontlines, we haven’t barely scratched the surface of tackling this illness. It’s all seen through the prism of the money.

If you really want to know where someone's priority is, follow the money. The money has not come into the space. We still treat mental health and addiction as a as a grant. SAMHSA is the leading agency. But it reflects the fact that insurance still does not reimburse for mental illness and addiction in the same way that it reimburses for medical and surgical care as is required under federal law. I mean, if this were any other illness, we would have been doing a lot more by now.

Margaret Flinter: We also welcome back Dr. Anthony Fauci to the show. Now there's somebody who a country got to know very well. He also endured quite a bit of political pushback from certain circles, but he always

stays focused on the message and getting clear information out to people, and his message was we need to vaccinate the people of the United States, and we need to vaccinate the people of the world.

Dr. Anthony Fuci: Getting back to the issue is that a global pandemic requires a global response is really important, because as you are correctly saying, if we get the level of infection very low and we get the overwhelming majority of the population vaccinated in the United States, and a large proportion of the rest of the world, particularly in the lower and middle income countries are not vaccinated, that is a surefire way to generate additional new variants. We may not be so lucky the next time around that the variant that emerges is one that our vaccine is able to cover. It may be that it eludes the protection of the vaccine, which means we've got to get the rest of the world vaccinated.

Mark Masselli: Just as we seem to be turning the corner with increased vaccinations, at least in the United States, we saw the second wave, the Delta variant rolled over our shores in 2021. It swiftly became the dominant strain filling up hospitals and really putting unbelievable pressure on state leaders across the country. We are fortunate to have Kentucky Governor Andy Beshear with us. We had his dad with us when he was governor and who I think we all know here in the country, and our thoughts and prayers are with his entire state as they're dealing in grappling with this the after effects of that devastating tornado hit by a storm of another kind this summer, killer surge in COVID cases and the harsh political opposition to vaccines and masking requirements. I think Kentucky is one of those bellwether states in terms of the challenges that the country faces in educating people. I think Governor Beshear is a great voice and advocate.

Andy Beshear: Our state and the south will be the entire United States is on fire with the Delta variant. Now more than ever, we've got to make the right decisions guided by public health to save lives. I'll also say and we can talk about it, our hospitals are bursting at the seams. We have one that has a disaster plan, in effect, the disaster plan, people are being treated in their cars outside of them. We're calling in the National Guard to help where we're trying to take over testing for some of them to free up staff. We've asked FEMA for help. This is a time when we need strong leadership and I hope the legislature will step up and make the right decisions.

Margaret Flinter: One of the highlights of the past year in terms of our guests for me, Mark, is when we had NIH Director, Dr. Francis Collins, certainly a legend in his time, one of our eminent senior people, such a compassionate scientist joined us to make a case shedding a little bright light on the remarkable science that's been achieved during this crisis. As he pointed out that that's historically been true for big advances in science and technology being precipitated by a crisis, and

it will pave the way for many potential breakthroughs that will help humanity. But he was really worried as he was coming to the end of his tenure about how divided our country was in this ongoing war on science, which got in the way of everything from testing, to precautionary measures, to really getting the vaccine into all communities around the country.

Dr. Francis Collins: The current polarization of our country about almost everything has played out in a circumstance where it really has been destructive. Your political party really shouldn't be the main reason for you to have a view about vaccines or mask mandates. But that's turned out to be the case. Things that really should be based upon evidence and the truth of what we actually know get colored over, and that is further made complex by social media and the way in which misinformation spreads oftentimes more quickly than the truth. I do worry about that, not just about what it's done to COVID-19, but about the future of our country.

If we're in a circumstance where truth has somehow stopped having the same purchase that it should on our decision making, and other things like politics, conspiracies, and just random opinions seem capable oftentimes of pushing truth aside. That is not a good place for the most technological nation on the planet to be, because the culture wars that are now so much affecting COVID-19 are killing people. We've lost 600,000 people, most would estimate that if we'd had a better management of our public health circumstances based on evidence tens of thousands, maybe hundreds of thousands of those lives could have been spared. This is really serious.

Mark Masselli: Well, we are going to miss him Margaret, though I think he's going to go back to his lab at the end of December.

Margaret Flinter: He’s not retiring, we’re sure of that.

Mark Masselli: He's not retiring. He's not. But, you know, I think having all of these various scientists on, we really got to see a good --- we had a window into the effectiveness of this mRNA platform. Now, of course, it's new to us, but it's been around for 15 or 20 years. It's something in our toolkit that we might have other types of impact in cancers or autoimmune diseases, it's being tested.

Former FDA Commissioner, Dr. Scott Gottlieb joined us to talk about that platform, but also some areas of concern, warning that we're not in enough stockpiles of the right kind of medicines including new emerging therapeutics for COVID, some of which are really showing some promise.

Dr. Scott Gottlieb: We've stockpiled somewhere between 50 to 80 million doses of flu medicines in preparation for a feared pandemic flu. We procured 1.7

million doses of this Coronavirus drug in the setting of a raging Coronavirus pandemic, and we stockpiled upwards of 80 million doses of a flu drug for, you know, flu pandemic that we fear but it hasn't arrived yet. It's sort of a mismatch between what we need in the setting of this pandemic and what we ultimately procured. There's probably things we could have done much earlier to ramp up manufacturing of this drug to have more available now, but it's too late.

It just sort of underscores the lack of preparation. This is another point to get back to in the book, not having the reserve capacity to scale the production of some of the therapeutics and countermeasures you're going to need in the setting of pandemic. We just don't have available capacity in this country that's ready to go.

Margaret Flinter: Lest we only focus on COVID and the pandemic at hand, there are other crises happening against the backdrop of the pandemic of COVID, Mark. We had our longtime climate change activist Bill McKibben joined us to talk about the UN's Climate Summit in Scotland, and the hopes that he had for the Biden Administration's Build Back Better legislation, which he said had the most aggressive measures yet to address the climate crisis.

Bill McKibben: Even when we signed the Paris Climate Accords, we knew and President Obama said at the time that it wasn't strong enough. Even if we met all the promises, the temperature would still rise about three degrees Celsius, so five, six degrees Fahrenheit, which is too much, we can't deal with that. That's why everybody is aimed at strengthening the ambition of countries. The crucial meeting is in November in Glasgow, and most important climate meeting, at least since Paris.

John Kerry, the Former Secretary of State is now our climate envoy, demonstrating I think how seriously the Biden Administration has taken this. He needs to be able to go to Glasgow to negotiate with something in his pocket, that something is that $3.5 trillion bill before the US Senate. If it passes, then he'll be able to say with a straight face, the US has begun to commit serious resources to this fight. China, India, we need you to move up yours. If he goes there with nothing in his pocket, then that's not going to be a productive meeting.

Mark Masselli: Well, it's so important the work the international gathering that was held was so important. As you said, Margaret, there are so many problems that we're facing all at once and certainly a very important one is women's reproductive rights are undergoing really an enormous threat. The greatest threat I think from the passage of Roe versus Wade 50 years ago. There are several restrictive abortion laws landed before the Supreme Court. I think we saw recently the Supreme Court sort of punted on that, but we got an opportunity to

sit down and hear from Planned Parenthood President Alexis McGill Johnson who joined us to talk about what was at stake.

Alexis Johnson: SB8 is a six week blatantly unconstitutional ban against abortion. Normally, when you have an unconstitutional law you are able to appeal. This law sue the --- sue the state law makers who put it into place. Instead, what Texas has done is created a provision where the state actually cannot enforce the law that they created, and instead empowers average citizens, citizens in any state even outside of Texas to enforce the law with what's called --- been called a Bounty Hunting Provision.

Margaret Flinter: Her concerns were not unwarranted. The High Court has already failed to block the Texas law banning abortions after six weeks and has allowed vigilante citizens to go after abortion providers. These are troubling times indeed for women's health and reproductive freedoms. We also had a visit with Dr. Eric Topol has really become a voice of reason throughout the pandemic, and he helped us to understand the threat that was posed by the new Omicron variant.

Dr. Eric Topol: I think the main property of Omicron that is disturbing and very concerning is that it has marked immune evasion that it gets --- it works around our recognition from the prior virus versions and from our vaccine immunity to some degree, okay, and so that gives it an enhanced ability to spread. That's what we're seeing, of course, and a lot more to come.

Mark Masselli: He is all about the future. I think as we look back at the past two pandemic years, I'm reminded again and again of how many brilliant minds are using their talents to improve health care. We started off with thanking the health care heroes, and we want to thank our staff, we want to thank everybody who's on the front line. The front lines include the schools, include the folks who are serving us at restaurants. Really, amid all these challenging stories, there's a need to really focus in on the positive and the opportunities that present themselves even in this difficult time.

Margaret Flinter: Well, I'll count is one of those positives that the Affordable Care Act has remained intact. We still remember the December day when that passed Congress and what an exciting time that was more than 10 years ago. Also much promise in the President's Build Back Better initiative, which seeks to address challenges that impact America's health and that have been on the progressive agenda for a long time to address child poverty, the cost of prescription medications and of course, climate change.

The bill has stalled in Congress and action has been pushed into the new year. But we are hopeful as we go into the new year that we'll see some progress on this legislation, which would do much to

address inequity in this country. We know that if we can address inequity, we address some of the fundamental causes of poor health.

Mark Masselli: Yet we still have facing us right now the third wave of Omicron rolling over our shores and it will really --- we'll be looking to the remarkable science and scientists. There's a dramatic increase around the globe in research. We've had so many people who've been talking about this global network, right? Dr. Gallo and Dr. Topol and Dr. Haseltine and others have been really talking about this collaboration that's going around and how important it is. But I think people are realizing that we need to be working together, and the opportunities the mRNA vaccine technology will provide. We'll be watching as this story continues to unfold in 2022. You can expect to see some of the most important people in health policy and innovation, technology and global health. Join us here on Conversations on Healthcare, to talk about it.

Margaret Flinter: We look forward to as happy and healthy a conclusion to this year and into the next as we can possibly have. But in the meantime, to all of our listeners and viewers we hope you stay healthy. Take care of yourselves, get vaccinated and Happy New Year from all of us here at Conversation on Health Care.

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

Margaret Flinter: And I'm Margaret Flinter.

Mark Masselli: Peace and Health.

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