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Female: 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 speak with Dr. Francis Collins, Director of the National Institutes of Health, the largest biomedical research agency in the world, and the guy who led the Human Genome Project mapping the human genome. Dr. Collins talks about the acceleration of global research around the pandemic, the mRNA vaccine boosters, Delta and Mu variants and where the NIH research is headed next.

Lorri Robertson also checks in, Managing Editor of Factcheck.org. She looks at misstatement spoken about health policy in the public domain, separating the fake from the facts. And we end with a bright idea that's improving health and well-being in everyday lives.

If you have comments, please email us at CHCRadio@chc1.com or find us on Facebook, Twitter, Spotify or wherever you listen to podcasts. And you can also hear us by asking Alexa to play the program. Now stay tuned for our interview with NIH Director Dr. Francis Collins, here on Conversations on Health Care.

Mark Masselli: We're speaking today with Dr. Francis Collins, Director of the National Institute of Health the largest biomedical and public health research agency in the world. He's been leading the agency since 2009.

Margaret Flinter: Before that Dr. Collins was Director of the National Genomic Research Institute where he oversaw one of the most significant biomedical accomplishments of modern times the Mapping of the Human Genome. Dr. Collins, welcome back to Conversations on Health Care.

Dr. Francis Collins: I'm glad to join you at this propitious time as we continue to struggle with COVID-19.

Mark Masselli: Yeah and speaking of that, you know, millions of parents are taking their children back to school and many of the children are under the age of 12, without the benefit of a vaccine. And now you've said that the vaccine approval for younger kids may not come until late fall at the earliest. But just recently, the American Academy of Pediatrics, issued a request to speed up emergency use authorization for younger kids, because of the risk to their health has increased significantly with the Delta variant. What's the likelihood we'll see the vaccine authorization for younger children sooner than you would expect it? And really, why don't we have better fix on date certain for approval?

Dr. Francis Collins: That’s a good question. First of all, let's be clear that kids from 12 Up

can be immunized that has been approved for a while and unfortunately, only about half of them so far have been vaccinated and those kids are going back to school to. I had hoped we'd be in a better position than in terms of having that group of students less likely to be the source of outbreaks.

So we have a broader problem here just in terms of public acceptance of vaccines, both for adults and kids. But I get it that particularly parents who have kids under the age of 12, concerned about schools opening up again, wish that there was a way that those kids could have also been immunized. The challenge, of course, is you don't really want to begin to advocate for any kind of medical intervention for children under 12. Unless you're really sure you got it right. You can't consider kids as just being a little miniature humans, they have different physiology and different metabolism. So the data has to be generated by doing very carefully conducted clinical trials on kids of that age. That has been done. But it's not quite complete as far as the follow up for any kind of safety signals.

As I understand it, that data will be submitted by Pfizer to FDA later this month, near the end of September. And then FDA will need to look at the data. Now if everything looks perfect and there's no surprises and the efficacy and the safety are all beautiful, then you could imagine FDA granting approval in maybe just a month or so. But if there's any tricky thing there where they need to ask more questions, get some additional details, it could take a little longer.

So I think we all got to be careful here better not to over promise. I guess previously I've said well, I think by the end of the year, I would love it if that happened to be October. But it could certainly linger a little longer than that. And I totally get it why everybody's impatient. I am too.

Margaret Flinter: Well, right up there in the news, of course, is the issue of a booster for all the folks who have been vaccinated FDA now recommending a third booster for those fully vaccinated and especially if they're medically compromised. I think you've said in the past that maybe rather than rolling out the third dose of vaccine, you'd rather see the unvaccinated getting their first dose of vaccine. What are your feelings now around the booster and how important this is, as we worry about protection waning over time and the new coming variants Lamda and now Mu, possibly evading our vaccine protection even further what's your thought about boosters at this point?

Dr. Francis Collins: First of all, I would say the number one priority is to get those who have not yet been vaccinated, haven't even gotten their first dose to do. So those are the people at the greatest risk right now, especially with Delta, which is so incredibly contagious and may also be more severe than its predecessor virus variants. And so those 85 million

people are sitting ducks right now. And everything we can do, to try to convince them to look at the evidence and make a choice to roll up their sleeve is got to be number one priority.

But I don't think we ought to make this an either or when it comes to boosters. Since I made the statement you quoted, we've got more data now looking to see what's really happening as far as the effectiveness of the vaccines, and providing protection over time. A lot of this data actually comes from Israel, they've had a very complete ascertainment of what's happening, and they're relatively small country, and they have a single vaccine, the Pfizer vaccine, so we can really look and see what's going on. And it's pretty clear that the people who got immunized first back in January, are now showing more breakthrough infections, including some that are not just mild, but some that seem more severe. That's not too surprising. But now we can actually see the evidence for it. We're seeing some of that also now in the U.S. and data collected by CDC.

So it makes sense to begin to prepare for boosters, so that people who have been immunized can really give their immune system another jolt of reminder about what to watch out for, especially against Delta.

The good news is the vaccines work against Delta. But as they wane over time, they just need another kick. And that's what the boosters are supposed to do. That FDA right now is looking at that data, they will then decide. There'll be a meeting on September 17, where they publicly discuss the evidence for boosters. CDC and their advisory committee will then make a recommendation and as soon as September 20 that week, we might then see a recommendation coming forward for boosters, beginning with the people who got immunized first, which are mostly elderly people and healthcare providers, they were first in line and they should have been.

So it's based upon science. There's nothing arbitrary about this. The people who should get boosters right now, or maybe we should just call them third doses are the people who are immunocompromised, we know that they don't always get a full response to the standard vaccines, the two doses of Pfizer or Moderna or the one dose of J&J. Those folks as of a month ago were encouraged to go ahead and get another dose to try to be sure that their immune system, which is a little sleepy from chemotherapy, or immunosuppressive therapy for organ transplant patients, gets just one more chance to give them that kind of immunity.

Margaret Flinter: Oh, that's a great reminder for those that are immune compromised. You know, Dr. Collins you oversaw the Mapping of the Human Genome, really a remarkable feat. But surviving three Presidential administrations in the current political climate is also a remarkable

achievement. And I wonder if you could talk about your experience leading the world's largest Biomedical Research Institute, under President Obama, Trump and Biden. And how do we lessen the sting of politics which can have such a negative effect on the world of research?

Dr. Francis Collins: Well, it has been an interesting ride and I feel really privileged to have been given the opportunity to play this role. Fortunately, in most situations, medical research is not quite as politicized as everything else. Although there have certainly been exceptions with COVID-19. Regardless of your political party, or other persuasions, most people are really concerned about health issues, want to see advances made that would help prevent terrible diseases like cancer and heart disease and diabetes. And so that's what we do. And so we've been fortunate to be able to make that case and to get support from the administrations and from the Congress.

The problem that has really become much more severe though now relates to COVID-19 and how 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.

And so 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 often times 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 often times of pushing truth aside, that is not a good place for the most technological nation on the planet to be.

And I hope we can begin somehow to learn the lessons, 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 10s of 1000s, maybe hundreds of 1000s of those lives could have been spared. This is really serious.

Margaret Flinter: Well, it is so heartbreaking to have lost people after we had the vaccine. You know, in those early months when we had no vaccine, we just longed for the vaccine, to have lost people afterwards is truly heartbreaking. And I wonder if I can ask you, Dr. Collins, to comment on certainly an issue that many organizations struggle with, in which people have expressed that their faith is a reason to issue the vaccine. And I know your own faith journey has informed your approach to

science. And I wonder what your thoughts are, as you see people put forth their religion or their faith as the reason that they are refusing or if they're in an employment situation sometimes seeking an exemption to accept the vaccine. How do you answer that in terms of the science as we continue to navigate this pandemic?

Dr. Francis Collins: Well, thanks for that question. I am a person of faith as well as a scientist and I have not seen a conflict between those worldviews since I became a Christian at age 27. But many people do perceive such a conflict. And it may mean that people of faith sometimes are more suspicious of scientific developments, because they think they are secular or maybe even atheist, in their perspective. Actually, 40% of working scientists believe in God. So it's not as if there is this big divide, but sometimes it looks that way from the outside.

So I would argue that this is another place where we really have some work to do to try to help understand that science for the perspective of a believer is actually a way of understanding God's creation. And it's a gift to be able to do so and then to use that information to try to alleviate suffering. When people pray for deliverance from a medical disaster, what are they actually praying for? Well, perhaps some miraculous intervention, but oftentimes, I think the intervention comes about through the way in which science provides answers. And that's where we are with COVID.

So many people of faith have been praying that this epidemic could be managed that it wouldn't threaten the lives of themselves and their families. And we have an answer to that prayer. It's called the vaccines which are remarkably safe and effective. And it puzzles me that people of faith would look at those at somehow not consistent with what they've been praying for when in fact, it seems like it's right in the middle of that.

But I don't want to generalize every person of faith who has concerns about the vaccine generally has a series of questions about it, and they're not all the same. There's a lot of misinformation about whether this is something that is going to be dangerous, causing infertility, maybe it actually will give you the disease itself, which it won't. Maybe there's a chip in that vaccine needle that's going to allow people to track you around. No, that is not happening. There's so much noise out there.

And again, I think people have faith, maybe trying to find where is a credible place to look to get those answers. Just one place, I would say Curtis Chang who's a Pastor has done a whole series of videos on Christians and the vaccine. People really ought to have a look at that. They're very well done. They're based on the facts. He deals with a lot of the information that's out there that are scaring people and tries to really put the truth into the picture. And as a Pastor, somebody who

believes in the truth, the truth will set you free that's what Jesus said, I hope that will be something that people can look at if they're confused about what's going on. And listen to a credible source who's a Pastor not like me, some federal employee who runs a government agency, but somebody with that kind of credibility because Pastors have a lot they can do right now.

Mark Masselli: Well, and you do as well as a person of faith, and thanks so much. And we're speaking today with Dr. Francis Collins, Director of the National Institute of Health. You know, Dr. Collins, millions of deaths have occurred worldwide from COVID-19. And we're seeing really troubling phenomena long COVID is an increasingly prevalent outcome, even amongst those who have mild cases, and I'm wondering how you're directing Research at the National Institute of Health to help us understand the complex nature of long COVID. And can you describe the syndrome of long term COVID and its impact?

Dr. Francis Collins: It is one more reason we're really concerned about this virus. And it was unexpected that this respiratory virus would have this ability and as many as a third of the people who have the acute illness, to have that illness linger on for weeks, or even months, with a variety of symptoms that are very troubling and puzzling. And that includes fatigue, palpitations, brain fog, where people really have difficulties maintaining concentration that interferes with work or school. And we don't really understand the mechanism that is causing this virus to have that kind of lingering consequence.

Is it that the virus is somehow still in the body hidden away in some reservoir that we can't find? We don't see it there. Is it the immune system has been activated in a way that it can't reset itself? And is causing these symptoms? Is it some sort of effect on blood vessels? Because we know this virus does bad things to blood vessels? We don't know, we aim to find out.

So at NIH, we have one of the largest cohort studies we've ever mounted to track 10s of 1000s of COVID-19 survivors, figure out who it is who gets long COVID? Who doesn't? And what is the specific metabolism and immunology that we could learn about that would teach us what's going on and what to do about it. But we're still looking for those answers.

By the way, and this is one more reason for people who are skeptical about vaccines to really think about do you want to pass up the chance to be immunized, because if you think that, okay, COVID-19 maybe doesn't sound that bad, I'm a young person, young people get long COVID, too. And they may then spend months and we don't know how long this can go on in a very impaired state. The vaccines prevent that another reason to roll up your sleeves.

Margaret Flinter: Dr. Collins, looking back over our shoulders, to the first months of the pandemic, it was testing, testing, testing, right. We were so concerned about testing. And there were a lot of critiques that as a country, maybe we dropped the ball on standing up a testing infrastructure all across the country. But we find ourselves at this point and I wonder, particularly in the United States, what's the role of testing now and maybe particularly rapid testing? What should that infrastructure look like in communities all across the country?

Dr. Francis Collins: Yeah, we did get off to a rocky start. NIH was asked by the Congress to jump in here back in April of 2020. And they gave us additional resources to try to develop new technologies, especially those that could give a rapid response at the point of care. So you didn't have to wait a day or two, to get a result back from a central lab. That includes now home tests, which you can get at the drugstore, a direct result of the program we founded called RADx rapid acceleration of diagnostics.

So we're doing pretty well now in terms of being able to get rapid answers for people who have symptoms where you're worried about is this COVID. And we need to worry about that because you want that person immediately isolated, so they don't infect other people. What we haven't done so well is to figure out how to really put in place asymptomatic testing in places like schools and businesses, because that is a really important part of ending this pandemic.

One of the more diabolical aspects of this SARS-CoV-2 is its ability to infect people at high viral loads, who have no symptoms, and they then are infectious for others around them. Unless you do that kind of asymptomatic testing, especially in areas where you have a lot of people packed together like schools, you're going to miss that. Now, we do have the technologies now to start to do that. But we haven't really quite figured out how to distribute them. And many organizations, be they businesses or schools are looking for advice.

Let me just mention a website that can help with that in terms of choosing amongst the options that are out there about what kind of testing you might want to put in place. And this is just called whentotest.org in an effort put together by NIH and MIT that I think a lot of places have found valuable. But you have to have the resources of course, testing is not free. The federal government has distributed a lot of money to the states for this much of which hasn't been spent yet. People are still trying to figure out how best to apply the technology. But boy here it's the fall and schools are starting up and Delta is out there. This would be a great time to really pull that together.

Mark Masselli: Dr. Collins, I want to pull the thread on Margaret's comment about infrastructure and talk really about vaccine distribution. You know, in

America, we don't have an adult vaccine distribution system like we have with children, and we're seeing in Israel the COVID Czar said we may need a fourth shot. We know already that it may not be like the flu, it may be not 12 months, it may be eight months. We don't know all of the data yet. And the healthcare system is really strange health centers, our hospitals are strained in terms of just delivering regular care, do you think we need a Vaccine Corps or some group that's like the Peace Corps VISTA that really sets in place an infrastructure, so every community has access to that, where education could happen and the like, because relying on the current health system seems to be straining it. Are we really prepared on our distribution model?

Dr. Francis Collins: Well, I think all of us who've looked at the U.S. healthcare system over the years would agree that it's far from ideal, and that COVID-19 has pointed out, for instance, the health disparities that are very much part of our system where people really don't have equal access to healthcare, depending on your resources. And this needs to be addressed, not just for COVID, but for lots of other things.

In terms of your question about a vaccine corps, that's really the CDC's role. The problem is CDC has been hampered by having had their resources cut over the years, and they depend on the states and the State Health Departments have been really working on fumes, as those budgets have also been severely constrained. We need to beef that system up. That's the place this needs to happen.

I think we've got the ability to deliver vaccines, because pharmacies have stepped into that 75,000 of them. And so right now, 95% of the country is within five miles of a site that can give you a vaccine. The trick is the organizing of it, the delivery of the doses and the database to keep track of where we are with all of this, which is important to do, but also concerns people who are worried about privacy and tracking of medical information.

I think this ought to be the wake up call to get there. Unfortunately, there's some politics in that one too. So we're not quite there. But one of the things we have to do, as far as lessons learned from this pandemic, is to recognize that our public health system in the United States has been allowed to atrophy and it needs a big infusion of resources to get back into a place that would be ready for something like this the next time.

Mark Masselli: We've been speaking today with Dr. Francis Collins, Director of the NIH and former leader of the team that Mapped the Human Genome. You can learn more about his groundbreaking work by going to www.nih.gov, you can follow his blog at www.directorsblog.nih.gov. You can follow him on Twitter @NIHDirector. Dr. Collins, thank you for your lifelong dedication for advancing biomedical research, seeking clues to some of the most confounding diseases and

conditions plaguing humanity and for your tenacity in addressing the mysteries of genomics and of this pandemic and for joining us today on Conversations on Health Care.

Dr. Francis Collins: I'm glad to have talked with you. We're all in this together. We're going to get through this, but we'll get through it faster if we really depend on the best science and we have got a lot of that to offer.

Margaret Flinter: Absolutely. Thank you so much Dr. Collins.

Mark Masselli: Thank you so much. At Conversations on Health Care we want our audience to be truly in the know when it comes to the facts about healthcare reform and policy. Lori Robertson is an award winning journalist and Managing Editor of FactCheck.org, a nonpartisan, nonprofit consumer advocate for voters that aim to reduce the level of deception in U.S. Politics. Lori, what have you got for us this week?

Lori Robertson: The seven day average of COVID-19 hospitalizations in the U.S. increased by 322% from mid-June to mid-August, stripping the ability of medical staff in some states to care for patients. The seven day average of hospitalizations was more than 80,000 on August 15. Hospitalizations tend to be higher in states with low vaccination rates, including Florida, Alabama, Mississippi and Louisiana.

Despite the rising numbers an Instagram post questioned whether COVID-19 is quote, “Truly a pandemic that was overwhelming hospitals” if the post claimed “Hospitals are firing nurses who refuse to be vaccinated.” Some hospital staff have been fired for refusing to get the vaccine. But Colin Milligan a spokesman for the American Hospital Association told us the overall number fired for that reason is likely to be very small. About a quarter of all hospitals in the U.S. have some sort of vaccine mandate, but there isn't evidence they are shedding employees due to the mandate policies.

Earlier in the pandemic some healthcare providers were forced to tighten their budgets and reduce staff due to lower overall patient volume, cancelled elective procedures and higher expenses tied to the pandemic and the pandemic continues to put a severe financial strain on hospitals. But the Bureau of Labor Statistics data show hospital employment has actually increased slightly by 11,000 jobs from January to July. And hospital employment was up by 45,000 jobs in July compared with a year ago. But staffing is still below the pre-pandemic high in February 2020.

In mid August, the President of the Florida Hospital Association said that many hospitals in that state are quote “Stretched to their absolute limits.” And that’s my fact check for this week, I'm Lori Robertson, Managing Editor of FactCheck.org.

Margaret Flinter: FactCheck.org is committed to factual accuracy from the country's

major political players and is a project of the Annenberg Public Policy Center at the University of Pennsylvania. If you have a fact that you'd like checked e-mail us at www.chcradio.com, we'll have FactCheck.org's Lori Robertson check it out for you here on Conversations on Health Care.

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Mark Masselli: Each week Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. Over the past few decades, kids have been getting less and less physical activity throughout the school day and as budgets have been tightened Phys Ed has become less prevalent in many schools. University of Michigan researchers wanted to find a creative and effective solution that would increase kid's movement and increasing sedentary lifestyles without disrupting the school day

Dr. Rebecca Hasson: We looked at the scientific literature in terms of prolonged sitting. And they have demonstrated that if you just do two minutes of activity, a small burst, get up do some movements, activity in that small of a dose can have dramatic improvements on health on cognition on learning. So we decided to develop an intervention a program that would allow children to get these small bursts of activity throughout the day.

Mark Masselli: Dr. Rebecca Hasson is Principal Investigator for inPACT Interruption of Prolonged Sitting with Activity. She wanted to find out if just two to three minutes short bursts of physical activity, five times a day would impact the kids cumulative movement. The research showed that kids of all shapes and body types found the program easy to participate in.

Dr. Rebecca Hasson: We typically see in PE or recess lower participation in girls compared to boys. But in classroom activity breaks you actually see similar rates of participation, if not higher rates of participation in girls compared to boys. We also saw that for children who are carrying a few extra pounds that those children also were exercising at a high intensity, even children with asthma, they were even able to do the activity breaks at a higher extent than their children without asthma.

Mark Masselli: Dr. Hasson a Kinesiologist said they wanted to design the intervention that would be easy for teachers to adopt and manage. So they created videos designed to get kids moving quickly then allow them to quickly ease back into their learning mode,

Dr. Rebecca Hasson: We created a compendium of 200 activity breaks that are just three minutes long. So the teachers had a variety of different types of activities, whether it was Jumping Jacks, Leap Frogs, something that will get their heart rate in the target heart zones, we got a lot of positive responses, particularly for the videos from the teachers,

because it was really easy to implement.

Mark Masselli: Kids burned on average, about 150 more calories per day, and at the end of the week, had accrued a significant amount of physical activity.

Dr. Rebecca Hasson: The kids when they left the laboratory, when they went home, they still continued to be physically active. We had these little accelerometers. They measure movement at the hip. And so it tells us how many calories were they kids burning away from the laboratory and how much physical activity were they getting.

Mark Masselli: A low cost easily adoptable fitness intervention for kids, allowing short bursts of physical activity throughout the school day, enhancing fitness, empowering kids to move more positively impacting the learning experience. Now that's a bright idea.

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

Margaret Flinter: And I'm Margaret Flinter.

Mark Masselli: Peace and Health

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Moderator: 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.

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