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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 health care of the future.

This week, Mark and Margaret speak with Dr. John Halamka, President of the Mayo Clinic Platform, a partnership with Google and hundreds of other entities across the health care ecosystem to leverage data, artificial intelligence and other technologies to improve health care. He talks about the COVID-19 Healthcare Coalition, he's overseeing their coalescing important data across the whole pandemic, infection hotspots, supply chain for ventilators and PPE, helping the nation tackle this foe.

Lorie Robertson checks in Managing Editor of FactCheck.org looks at misstatements about health policy in the public domain separating the fake from the facts. We end with a bright idea that's improving health and well-being and everyday lives. If you have comments, email us at chcradio@chc1.com or find us on Facebook, Twitter, or wherever you listen to podcast. You can also hear us by asking Alexa to play the program. Now stay tuned for our interview with Dr. John Halamka here on Conversations on Health Care.

Mark Masselli: We're speaking today with Dr. John Halamka President of the Mayo Clinic Platform, a new partnership with the Mayo Clinic and Google creating a portfolio of digital platform businesses focusing on transforming health. He's advised several presidential administrations on health information strategies and recently formed the COVID-19 Healthcare Coalition, a broad based private sector coalitions to confront the coronavirus pandemic.

Margaret Flinter: Most recently Dr. Halamka was the Executive Director of the Health Technology Exploration Center for Beth Israel Lahey Health in Massachusetts, and was the International Healthcare Innovation Professor at Harvard Medical School. He's the Co-author of the book Geek Doctor. Dr. Halamka, welcome back to Conversations on Health Care.

Dr. John Halamka: Well, I'm sorry happy to be here. I only wish we could be in person.

Mark Masselli: Yes, we do too. But I've been thinking about in the context of the pandemic, about your really long history of advocating for

wider use of telehealth, your frustration about the interstate regulation of healthcare providers and obviously with the arrival of the corona virus pandemic, it's illuminated some of the inherent deficiencies of the American healthcare system. But we saw an enormous amount of regulatory relief that came swiftly adopting most of the issues you've been advocating for. I'm wondering how these changes made or might actually be a catalyst for some kind of change in the healthcare system?

Dr. John Halamka: Well, absolutely, and what a wonderful introduction to what's happened over the last eight weeks.

Margaret Flinter: Is it only eight weeks?

[Crosstalk]

Dr. John Halamka: -- decade we've said, well, if we are going to be patient centric, we want to meet the patients with the kind of care they want, and the setting they want that's appropriate to their disease. In fact, if this is the setting they want, we should offer it. Oh, but wait, there are regulations that states I can't practice that way, or I can't cross the state border, who's going to malpractice insure me? In the last eight weeks, every one of those regulations has been waived. There is no longer a requirement for state licensure. If I'm sitting in Boston and I want to provide consultation to New York, no problem. If I am a MD and NP a PA, a paramedic, all have waivers and new guidance.

In fact what we've had to by force do over the last eight weeks is enable a healthcare system to be patient centric and virtual. In the last eight weeks telehealth has grown by 1118%. How do I know that? As part of the COVID coalition change healthcare contributed all the claims data de-identified for the last eight weeks. We can actually see who has claimed a virtual visit in the last eight weeks over a 1000% growth. How about this, don't roll back. Every federal official I've spoken with certainly every provider, every patient, I've spoken with had said, you know, this is actually working pretty well, don't roll back.

Margaret Flinter: Well, Dr. Halamka, I just have to think timing is everything. You took on this role of President of the Mayo Platform building partnerships across entities all over the healthcare ecosystem from provider organizations like Mayo, tech entities like Google, academia, many players in industry. Then the pandemic hits and you shift your attention to really leveraging these partnerships to confront this public health crisis of our

time. Talk with us about this COVID-19 Healthcare Coalition that you formed, who are your partners in this endeavor, and what are you trying to achieve?

Dr. John Halamka: Well, sure. What a number of us recognized is there wasn't an opportunity to convene collaborate and communicate as an entire private sector, and so The MITRE Corporation which is a federally funded research and development center agreed for free to simply be the program management office by which we could convene. We started with a few key tech players, as you said, and a few key academic leaders, Mayo Clinic, the University of California, Kaiser, we're now up to 800 organizations working together on 14 work groups. Those work groups range from such things as contact tracing, how do we figure out who was exposed and how to get them into treatment and follow up.

Convalescent plasma, if you look at what cures we have available to us today, probably the leading opportunity is to say, oh someone had an infection, let's extract their plasma and give it to three other individuals so they get protective antibodies. Not only the technology platforms, but even simple things like PPE coordination, ventilator delivery, supply demand matching. It's an extraordinary exciting endeavor because no one expects to be paid, no one is self-interested, no one has any IP restrictions. That means fierce competitors are working side by side and completely openly.

Mark Masselli: We're really were waging this war on the pandemic, and really on so many fronts. You say that one of the most important weapons in our arsenal is data. I think we're all seeing sort of the apps that are coming out that tell us about mobility across the country or in our state down into our community, we can look at somebody who might self-identify as having the virus and where they've been tracking in terms of our path. Some of these pose concerns about civil liberties. But tell us about the kinds of data that are being amass right now and with the COVID-19 Healthcare Coalition, how you're assembling and disseminating this complex data to frontline warriors, healthcare workers and public health decision makers?

Dr. John Halamka: You know that in the world of information technology there's the techie stuff, but there's also the policy stuff. Then there's what I'm going to call the psychiatry stuff, which is, oh can we share this data? How do you feel about sharing this data? It's very hard to go to a healthcare system and say, please contribute all your data, because there's very legitimate concerns about privacy, so we've worked together to create

measurements. We say things like, oh we want to find out if anti-malarial drugs are actually beneficial, or convalescent plasma is reducing ventilator days. What have we done is working with the electronic health record vendors and academics and scientists. We've created what we call numerators and denominators, right, here's how you'd measure this.

Then we hand those off, and they're baked in to the electronic health record of each site, each site in the country can run the analysis and report the result. They don't have to send their data to anyone. There are no concerns about privacy if what I tell you is, oh we've given this therapy and it reduced ventilator days by two, right? This is a very federated approach. But there are other data elements we need. You've identified what about civil liberties and the collection of contact tracing? What if I agree that working with Google on Android phones and Apple on iPhones, we're going to give you the citizen totally the option to participate in a contact tracing activity? Does it identify who you are? No. All it does is say, was this phone near a person who identified as a COVID of positive person? We get to define what near means, six feet. At that point, we can notify you, a-ha you were near a person that was infected. This is the Google Apple privacy protecting, consumer controlled idea that we hope will motivate the country to be very cooperative and collaborative in contact race.

Margaret Flinter: Well, one of the things that we have talked to our national partners around the country are the unevenness of the penetration of the pandemic, right, and the unevenness of the burden on hospitals. You had New York pleading for 40,000 ventilators. Meanwhile, what happens in Chicago and San Francisco, in South Dakota where we've seen outbreaks, tell us a little bit about how you're working together to identify where the next hotspot is coming? How are the healthcare members of your coalition working to make sure that they have primarily the people as well as the rooms to handle hotspots and surges in hospitalizations as they emerge?

Dr. John Halamka: First is I think we all need better situational awareness, so you got to understand the battlefield, if you will. Well today do we understand who needs a ventilator? How many ICU beds are occupied today? Supply demand cannot be coordinated unless you have situational awareness. HL7, which is a standards organization in this country has worked with companies like Audacious Inquiry to define new standards, which the electronic health records are going to now be baking into their

software that will start to tell us such things from a public health perspective as who needs what, so that's all coming. It's just unfortunate it wasn't already there at the beginning, but it is coming shortly.

To your point about understanding who is infected and growth rates and potentially staffing issues and supply issues, numerous companies are working with data from the CDC, and oddly enough, even from journalists like the New York Times, which are now coordinating on GitHub data collections of this nature and providing visualizations. A few moments ago, for example, Mayo Clinic sent all of its senior management the situational awareness, Minnesota map showing every test had been done, every infection by county, by geography so we now understand how to deploy resources. To be honest, we've actually deployed resources differently because now we understand hotspots today and what will be a hotspot tomorrow.

Mark Masselli: We're speaking today with Dr. John Halamka, President of the Mayo Clinic Platform, a portfolio of new digital platform businesses, focusing on transforming health. It's a new partnership between the Mayo Clinic and Google, along with many other healthcare industry entities. He recently formed a broad based private sector coalition to confront the COVID-19 pandemic. We've talked earlier about the regulatory relief that we just put in place because of the virus, and it might well lay the groundwork for the next pandemic. But, you're somebody who tries to think four to six quarters out I think you say. I worry that we're solving the problem of this pandemic, not laying the groundwork for whatever comes next.

Dr. John Halamka: Many authors have characterized COVID in a framework. But here's mine, I say here's the -- we're in an isolation phase right now. But what comes after isolation, testing, much more testing, all kinds of testing, whether that's the testing for PCR, do you have the infection, or the IgG? Did you have the infection? Might you be immune, because we know we don't know yet if having the antibody really confers immunity. Now, we're going to have what I'll call probably a year of pre-vaccine return to work gradually rebuilding the economy and opening up some businesses with social distancing. Then we'll eventually have a vaccine, and then we'll have a post-vaccine rebuilding, and then we'll have the new normal. We have to plan for all five of these phases, and so what kind of things might you do?

For the testing phase radically improve access to testing, and

so Mayo Clinic is working on a federated model where it will be able to coordinate testing across many labs in the country, and with its data flows to hospitals make it really simple to get all the tests you need quite rapidly at reasonable cost. What if you are PCR negative? You're no longer infected, an IgG positive, you have immunity. Is that a passport to return to work? Don't know, right? We have to figure out the algorithm which Mayo Clinic is working on with others now as to what constitutes safety to return to work, and then how are you going to do that? Well, one notion is what if I gave you a QR code on your phone that said, based on your tests that QR code asserts you have a passport to return to work. How do you do that in a privacy protecting non-disclosing way, right? We're working on all that kind of thing.

Then, of course, as I said, helping with cures and helping with vaccine development and figuring out there are many vaccine approaches. We have companies we're partnering with who are mining the world's literature and the experience of COVID data today to figure out how to best target a vaccine. Then finally, the new normal, 20% of our healthcare is going to be delivered virtually. Every organization has to think about what is a hospital without walls? I mean, right, it could be everything from, oh, look, I have a mole, is that skin cancer? I just take a photograph and it's a store and forward asynchronous to we have a virtual visit to I'm sick and I actually need to run a hospital in my home to I have an ICU in New York that's understaffed, and can we bring an ICU specialist from around the world to help that? In fact, Mayo Clinic is currently staffing a New York ICU remotely. It's thinking of all those technologies and the new normal and being ready for it.

Margaret Flinter: Dr. Halamka there's a group that we're thinking about a lot, obviously, first and foremost, our frontline healthcare providers are in our hearts and minds. But really thinking about that generation that's coming up today's residents, students, and today's younger people who have aspirations of being doctors and nurses and health care providers of all kinds, you've spent many years at some of our most venerable teaching institutions. When you think about this generation coming up, they're looking at the experience of our ER and ICU personnel and wondering, wow, do I jump into that fire with both feet? We had former US Surgeon General Vivek Murthy on recently who talked about his admiration at the way people are the residents and the trainees jumping in. Probably another group of people saying telehealth kind of remote care? Yeah that is exciting as I thought healthcare might be,

what do you see for this next generation in terms of some positive impact on their training and their future work to be the great healthcare providers they want to be to maybe avoid burnout as one of the things that we've all worried about, what's your thoughts on how that training experience is going to change?

Dr. John Halamka: I'm an emergency physician, right? I finished my emergency medicine residency in the early 90s, right at the really tail end of HIV.

Margaret Flinter: HIV right.

Dr. John Halamka: My whole training was in the HIV response. What did you learn back in the HIV era? You jumped right in the situations.

Margaret Flinter: Absolutely.

Dr. John Halamka: Everyone goes into a medical specialty with a different set of skills and a different personality. I imagine we're going to develop a new specialty called the virtualist. Today you have the intensivist, or the hospitalist, but why not the virtualist where somebody is actually in effect, a Sherlock Holmes, of being able to look at your body language, listen to your voice, look at your history, and help diagnose your disease, so actually quite an exciting opportunity for people. I actually don't worry. I think that the folks who are graduating from medical school now and, as you say, I teach all of them Every day, we're actually looking at a new way to practice, which in some ways will actually be very satisfying. When you love what you do, burnout is not so much an issue.

Mark Masselli: We run a practice caring for about 150,000 people who live in poverty providing primary care. But we also run a program nationally where we provide e-consults to about 2 million safety net population, and you were talking about the sort of virtual dermatology. I'm wondering, as a physician, what message do you have to our patients who are starting to see, even though we've stood up a huge telehealth operation, diminishing the number of people who are going to a specialist. What's the message if I'm a patient out there with this new world in front of me, but I've got my chronic condition I had before I'm sort of frozen in place in terms of accessing the healthcare system. What's the message to patients out there in terms of how they might get their hands around what's happening in front of them? What are your thoughts as a physician and also somebody who's on the cutting edge of technology?

Dr. John Halamka: That's a great observation. We need to recognize there is a digital divide of those who have technological comfort or literacy or even access to Wi-Fi or a smartphone. Let me give you an example of why we need to meet the patients at their level of technological comfort. Last year in Boston, a leading technology company asked if I would take some engineers to one of our mass health clinics to really understand what was it like to deliver care on the front lines of those who are often the underserved, may not speak English or have education or income? They walk up to a homeless gentleman and they say, hey sir, we're a bunch of engineers doing some research, what's your favorite wearable? He looked at them and said, socks, right?

Margaret Flinter: Perfect, perfect.

Dr. John Halamka: We can't assume that people are going to be running thousand dollar phones and wearables all over their body. We have to be able to say, a-ha if that is you, and that is what you want and we will make available care at a distance that's very convenient, great. But if you have lack of access, and you would prefer an in-person visit, we have to offer that too. I mean, there's all kinds of balances. A couple of years ago I did a study on the Medicaid population and asked how many have SMS the ability to receive a text? Over 80%, and so that's fine, we don't need some sort of fancy video visit, we just text, it’s okay, and meet them at their level of comfort.

Mark Masselli: Great.

Margaret Flinter: We've been speaking today with Dr. John Halamka, President of the Mayo Clinic Platform, a new place partnership between the Mayo Clinic, the digital giant Google supporting a portfolio of new digital platform businesses focused on transforming health. You can learn more about their work by going to mayoclinic. org or follow him on twitter @JHalamka or follow his blog Life as a Healthcare CIO. Dr. Halamka, we want to thank you for sharing your knowledge and your time with us during this pandemic, for sharing your unique insights into the power of tech-based collaborations to transform healthcare through your passion and your humor and for joining us on Conversations on Health Care today.

Dr. John Halamka: Well, thanks so much everyone and be well.

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Mark Masselli: At Conversations on Health Care we want our audience to be truly in the know when it comes to the facts about health care

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 US politics. Lori, what have got for us this week?

Lori Robertson: In early March, President Donald Trump said that restrictions he placed on travel to and from China because of the coronavirus pandemic "saved a lot of lives". That claim grew to "hundreds of thousands by early April", but we found no support for such figures. We asked the White House for support for the President's claims whether there was support for his claims of tens of thousands or hundreds of thousands of lives saved. We haven't received a response.

The few studies that have been done estimate the US's and other countries travel restrictions regarding China had modest impact, slowing the initial spread outside of China, but not containing the coronavirus pandemic. On January 31st the Trump Administration declared a public health emergency for the novel coronavirus, and announced travel restrictions to and from China effective February 2nd. As of that date, there were nine confirmed cases of COVID-19 in the United States, though there had been very little testing.

Under the travel restriction non-US citizens, other than the immediate family of US citizens and permanent residents were prohibited from entering the US if they had traveled to China within the previous two weeks. The study published in the Journal Science estimated that travel restrictions instituted in Wuhan, China would "only modestly affect the spread of the pandemic." Travel restrictions could delay but not stop the spread of the disease, and social distancing and hand washing behaviors would reduce the transmission the study found.

Another study published in the Proceedings of the National Academy of Sciences found that travel restrictions and airport screenings in several countries "likely slowed the rate of exportation from Mainland China to other countries, but are insufficient to contain the global spread of COVID-19." It's possible that the US travel restrictions on China could have had some impact in slowing the importation of cases to the United States. But we don't have evidence of that, let alone evidence that hundreds of thousands of lives were saved. 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, email 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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Margaret Flinter: Each week Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. It's estimated that a majority of a person's lifelong health expenditures are often spent in the final months of life. But death is one of those topics that generates the least amount of conversation in the clinical setting for folks who end up critically ill or facing a terminal diagnosis. This can often lead to poorly communicated end of life wishes being discussed with the clinician who then often resorts to extreme interventions.

Dr. Manali Patel: There's this unspoken misconception that by having honest conversations about prognosis that we are somehow removing the hope that patients are coming to us looking for. Actually, most studies that have evaluated this have shown that when you provide honest prognostic information to patients and allow patients to be part of the decision making about their goals of care, they actually have more understanding of their disease process and better satisfaction with their care overall.

Margaret Flinter: Dr. Manali Patel is a clinical researcher at Stanford University School of Medicine. Her earlier research at Stanford had yielded an interesting finding. Late stage cancer patients felt more comfortable talking about end of life issues with a layperson as opposed to a clinician. She entered fellow researchers followed patients at the Veterans Administration Palo Alto healthcare system after they were diagnosed with stage three or four or recurrent cancer. Half the people were randomly assigned to speak with a lay worker about the goals of care over a six month period.

Dr. Manali Patel: She learned as she went, and she came to that realization that these conversations really are not scary. We had hired her specifically because of her service orientation and because she had a very supportive year. That's really the main crux of this intervention.

Margaret Flinter: 92% of the participants who received the layperson intervention, compared to only 18% of the control group, were likely to have end of life directives in their electronic health record and often choosing hospice over emergency room

interventions. The health cost of both groups varied as well. The average cost of care for the intervention group in the last month of life was about $1,000 versus 23,000 for the control group. Dr. Patel said one of the more interesting findings was much higher patient satisfaction.

Dr. Manali Patel: We found the satisfaction scores went up for the patients in the intervention arm, but they went down for patients in the control arm. As well as the satisfaction with decision making, we found overwhelmingly that the patients in the intervention arm were very satisfied with the decisions that they had made regarding their medical treatments that the patient in the control arm really did not have much movement at all in terms of how satisfied they were.

Margaret Flinter: A low resource compassionate patient centered intervention that assists terminally ill patients their families and their clinicians to have a frank discussion about end of life wishes, improving patient satisfaction at such a sensitive and challenging time. That's a bright idea.

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

Margaret Flinter: And I'm Margaret Flinter.

Mark Masselli: Peace and Health.

Female: Conversations on Health Care is recorded at WESU at Wesleyan University, streaming live at www.chcradio.com, iTunes, or wherever you listen to podcast. If you have comments, please email 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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