

Dr. Saad Omer

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Moderator: 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, global health, and the great minds who are shaping the healthcare of the future.

This week Mark and Margaret speak with Dr. Saad Omer, Director of the Yale Institute for Global Health and internationally renowned epidemiologist. He talks about the Covid-19 epidemic, what government, health institutions, universities and individuals need to do to stay safe and how global researchers are rapidly working towards a vaccine as the disease begins to spread.

Lori Robertson also checks in, the Managing Editor of FactCheck.org, and looks at misstatements spoken about health policy in the public domain, separating the fake from the facts. We end with a bright idea that's improving health and wellbeing in everyday lives.

If you have comments, please e-mail 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 Conversations on Health Care.

Now stay tuned for our interview with Dr. Saad Omer on the Covid-19 outbreak here on Conversations on Health Care.

Mark Masselli: We're speaking today with Dr. Saad Omer, Director of the Yale Institute for Global Health, Associate Dean for Global Health Research, and Professor of Medicine and Infectious Disease at the Yale School of Medicine. A renowned epidemiologist, Dr. Omer is the Susan Dwight Bliss professor of epidemiology and microbial diseases at the Yale School of Public Health. Dr. Omer, welcome to Conversations on Health Care.

Dr. Saad Omer: Thanks. It's my pleasure.

Mark Masselli: Dr. Omer, I think it's fair to say that the whole world is watching this outbreak of Coronavirus and you know it continues to spread beyond its origins. It emerged in Wuhan, China. It's really grown to epic concern. You specialize in research and study of global infectious disease. So could you give us a quick description of this new strain of Coronavirus, Covid-19 and its properties, how it spreads and maybe just help us put this in context with other viruses and flus, SARS or MERS things that people might remember having gone through.

Dr. Saad Omer: This is an emerging virus. So there are things that we are getting familiar with. We know a lot more about this virus now than we knew

a week ago or two weeks ago or three weeks ago, but still our knowledge about this virus and this outbreak is getting updated very frequently. But we do know that the virus is more infectious than influenza. It's a respiratory virus. The mode of spread is through respiratory droplets. The evidence about that being airborne, meaning the particle size being so small that it hangs out in the air is none to very, very limited, at this time. And we also know that it's not as infectious as, let's say like measles, which is if a person who has the virus enters a totally susceptible population, measles infects approximately 12 to 15 individuals, this one is 2.2 to 2.6 as an average, but this is certainly more than influenza. There's another parameter that we pay attention to, which is the mortality, how many actually die of it. In China, in central China, it's less than 2%. But the early impression is that outside that intensive region of outbreak the mortality rate is a little bit lower.

Margaret Flinter: But Dr. Omer, I think you've just provided invaluable information and there's still so much we don't know as you said about Covid-19, because it's the first time it's appeared in humans. When people don't have all the information they like it just puts them on edge. In this case, I think we're seeing whole governments put on edge. So you recently hosted a forum at the Yale Institute on Global Health and you strongly urged that a global protocol needs to be put in place if we're going to not just help prevent the spread of the infection, but help prevent the spread of misinformation. Maybe tell us a little more about how the World Health Organization decides to shift classification from epidemic to pandemic in outbreaks like this.

Dr. Saad Omer: What I was alluding to is actually ongoing efforts, for example by the World Health Organization, putting in place common protocols for evaluating potential interventions for countries and even communities to adapt in terms of prevention, etc. But in this country, we are actually very fortunate to have a very robust technical agency in the form of the CDC, that was very quick to act providing these resources etc. that people can adapt and adopt more broadly preventing it in the communities and hospitals etc. Early 2000s there was an outbreak of SARS since then we've had a pandemic influenza. We have looked at MERS and more recently Ebola.

So what happens is WHO says, okay, this is an outbreak that we should pay attention to and at some point they convene a group of expert, a relatively small group of experts from all around the world and essentially say, is this emergency a public health emergency of international concern? Is there potential for it to impact multiple countries? After that there is an epidemiological and scientific classification issues, whether it's a pandemic meaning ongoing transmission, multiple generations of transmission in multiple countries spanning the globe. A big distinction WHO makes is the

public health emergency of international concern which they have declared this outbreak.

Mark Masselli: Just thinking about the trajectory of this outbreak. Your colleague, Dr. Albert Ko said the epidemic is still in this exponential phase. How should the public be educated about preparing themselves for this pathogen as it continues to spread and what's the best messaging for the public at large?

Dr. Saad Omer: A few things. Today if you ask me, is there a high individual risk of catching this virus in the U.S.? The individual risk is very low in terms of the probability of you getting it now, but I'm not downplaying the concerns people have and the general public is concerned about what could come in the future. Could that happen here? There's some uncertainty involved with that but these concerns are not unfounded. How we translate those concerns into action matters. We can have fear based paralysis that we enhance the potential impact of this outbreak by impacting our operations. So the best thing you could do is to live your life the way you are, but take precautions.

We are not powerless in the face of this outbreak. Yes, vaccines are needed and so there are things in the pipeline for that but it'll take a little bit of time. Yes, treatment is needed, etc. You can do a few things now that work for all respiratory viruses that are useful here. First of all, our best available and the most low cost tool is proper hand washing. So everything is there to do proper hand washing etc. yes there are hand sanitizer that help but you don't have to have those to be able to do that. So there are ways of doing that. Work with your kids. Work with your family and especially the elderly because they seem to be at a higher risk. If all families do that, you cumulatively decrease the risk of an outbreak getting to your family or your workplace.

The other important thing is self isolation if you have symptoms, if this outbreak comes here and one way of doing that is now we can work on Zoom or Skype or teleconferencing, etc. Don't be a hero, because that could impact your whole sort of work environment or school etc. And then with schools it's a little bit tricky. The schools should be rational about these things, letting kids know that it's okay to stay home. When the nurse sends out an e-mail and says it's okay to stay at home but the school doesn't put in place a remote broadcasting mechanism to those who stay at home and the teachers still penalize them. When people are at home they're not spreading it around into the community.

The other things you could do even now is to get your flu shot and here's the reason why. So flu shot doesn't biologically protect you against Coronavirus. What it does is initially when you have the symptoms, you don't have a lab test so the symptoms overlap. You

then go to the healthcare system, a lot of people come together and that's an opportunity for infection to transmit, and jam up the system by being there. If you have a flu shot you decrease the likelihood of actually going there and so you help with a pandemic response. Flu shots are really good, but they're not perfect, but they're specifically helpful against severe outcomes. You are leaving these things open, the healthcare facilities are more able to care for folks who, God forbid, are affected by the Coronavirus outbreak.

In terms of our responses look societies go through pandemics, that's not new and they come out on the other side either proud of their response or a little bit sheepish about what they did. And I want to make sure that we all recognize that the way we act and carry ourselves by not discriminating against specific communities, we don't want to have a History Channel documentary 20 years from now that makes us feel ashamed of our response that I was there and I didn't do anything about it. I urge people to have active compassion for folks, for example who have contacts with populations where this early epidemic emerged. But you know, as I often said, this is not a Wuhan virus, it is not a scientific name. It's a virus that transmitted initially from there, the influenza pandemic started on this side of the globe and was initially identified in North America would have been an incredible insult to injury if the world started antagonizing folks from North America, Mexico, the U.S., etc.

So as we respond to this, as we face the prospect of this outbreak, potentially becoming larger with the uncertainty of impact on mortality etc., we should be responding as folks who pay attention to the evidence and also we are compassionate, actively compassionate in how we behave.

Margaret Flinter:

Well, Dr. Omer while we're on that subject, it's a good time to send out a global shout out I think of respect and solidarity for the healthcare workers particularly in Wuhan, the city that's bigger than the population. I think who are from everything that I read just heroically working around the clock in difficult circumstances because of the huge volume of patients that they're trying to take care of. And I wonder for all the preparation that we've done for all the planning for bioterrorism and disasters that American Healthcare Organizations and Hospitals are prepared for, how well would any of us do confronted with something of this magnitude and so I wonder if you'd like to speak to the protocols to train, to equip, to protect the healthcare workforce that we so vitally need in times of an epidemic or pandemic.

Dr. Saad Omer:

Actually, there are many heroes in this outbreak. But amongst them at the front of that hall of fame, if you will, of people who went beyond themselves are health care workers, specifically those who

are in Mainland China combating this outbreak. Remember when these kinds of outbreaks happen, they have an impact on the whole health system. So folks who are coming in with heart attacks there is a basic frequency of that or those who are caring for those as primary care physicians and nurses etc. Coming back to the U.S., yes, we have a lot of muscle memory in this country now of hospital preparedness, their existing protocols that I know are being updated, and we at Yale are fortunate that the WHO collaborating center for hospital preparedness is actually two floors up for me, and there is a lot of work that has gone on to hospital preparedness.

Having a plan doesn't mean that everything will go smoothly but we do know or at least institutions at the central level are better prepared. Obviously, these kinds of trainings go up and down based on the emergency du jour we haven't had a large outbreak of a respiratory illness since the pandemic influenza that was approximately 9 to 10 years ago. Having said that, we talk a lot about central federal level agencies, but the frontline of this response is hospitals, health care providers, but also local and state healthcare departments, and for the past several years we have seen this boom and bust cycle where their baseline funding has been cut just devastated and we should be a strong public health system at all levels because CDC is a technical agency that doesn't have presence in all parts of the country, and that's the job of those who are embedded in the communities.

Once this thing dies down we should all be advocates for sustained increased funding for these entities because if we don't do that, we pay for it when you don't do long term planning, but that increases our vulnerability as a population as a country.

Mark Masselli: We're speaking today with Dr. Saad Omer, Director of the Yale Institute for Global Health, Associate Dean for Global Health Research and Professor of Medicine in the infectious disease. There's a lot of second guessing I think going on about the Chinese and about their response, but they've now quarantined entire regions to prevent the spread of virus and you're just seeing other countries the whole issue of the cruise ships, we're seeing these travel bans, flight restrictions. I'm wondering if you could tell us why you're so concerned about what the fallout might be from government's overreacting.

Dr. Saad Omer: Yeah. So there are certain things we know. We know we have experience in terms of planning, we meaning the global health community in terms of preparedness, etc. Overall, one way to deal with emerging situation is to close the gap between assimilating new information and actual decision making, empowering public health agencies, with decision making, the CDC director, the NIAH Director or the National Institute for Allergy and Infectious Disease director, so

soon after the first case was introduced in the U.S. I published an op-ed in the New York Times to say, look, yes, we are a democracy. Well, one could argue having the political leadership lead this is well within their purview, but it may not be prudent when there is an emergent outbreak. So I advocated for empowering the agency leads, fortunately those who lead these entities are mainstream scientists or public health professionals. For example, quarantine decisions should be based on evidence. So that kind of framework is the best practice.

Margaret Flinter: Dr. Omer, talk about the coordination that we're reading about between the scientific and the academic research communities. I know Yale has had a longstanding research partnership with scientists in China for many years, so your team at the Yale Institute for Global Health is actively involved in the current response there. Maybe talk to us a little bit about how these global partnerships between scientific and academic institutions really help to accelerate the research and the decision making and provide more information to entities like the World Health Organization and CDC.

Dr. Saad Omer: This is when you really see the benefits of a globally engaged university that if you have longstanding relationships you do two things. If you have former students for example going back or you have current fellows, etc. then when the data come out there's a little bit of a lag in terms of analyzing and you get those insights not just a little bit early but with some nuance, and outbreaks tend to be and should be all hands on deck kind of situations. I strongly believe the way universities can uniquely play a role in countering some of these threats is by being agile and being at the forefront of research and evidence synthesis, having contacts and longstanding relationships with academic peers not only help us contribute but also the other part of this equation is that that helps us prepare and translate that knowledge for domestic policy as well.

Mark Masselli: But I think what every one of our listeners is waiting to hear from you about what are you talking to your colleagues about in terms of the potential for a vaccine and give our listeners an overview.

Dr. Saad Omer: So the good news is that we as a scientific community, I work on vaccines, we as a scientific community have shortened the interval for biological development of vaccine candidates and by a lot. So compared to SARS etc. and some of the other stuff due to evolution in our ability to recognize the various genetic variants etc. and how to leverage that that has shortened the biological cycle. The second thing is there has been an explosion of these biotech and academic entities that are at the forefront of some of these newer technologies. The last accounting and the last tabulation I saw which was a couple of days ago that there are 37 approximately vaccination programs. These are programs meaning people say that they have candidates or

they're close to a candidate then they will evaluate humans and not all of them sort of bear fruit but this is, the bigger the pipeline the more likely it is that you get a few candidates that are really suitable.

Out of those there's only one candidate from the conventional big pharma or large vaccine manufacturer, and so because of that ecosystem we have made advances on the biological side of it. But there's still, in order to ensure both efficacy and safety in humans there's a process of going through these trials doing early phase trial and late phase trials, etc. So the current time horizon looks like at least a year before we have something close to even early licensure etc. But it can change as things emerge etc. and so on and so forth.

Margaret Flinter: We've been speaking today with Dr. Saad Omer, the Director of the Yale Institute for Global Health. You can learn more about his important work by going to www.yigh.edu or follow him on Twitter at SaadOmer3. Dr. Omer, thank you so much for sharing your insights and your expertise during this time of a rapidly unfolding story and for joining us today on Conversations on Health Care.

Dr. Saad Omer: Thank you. It is indeed a privilege.

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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 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: At the South Carolina Democratic presidential debate, several candidates disagreed with Senator Bernie Sanders over whether he had explained how he would pay for Medicare for All. Sanders cited a recent study led by a Yale researcher that found Medicare for all would lower total national health spending. That study published in the Lancet in February was led by a professor who said she was an informal unpaid adviser to Sanders' senate office for his 2019 Medicare for All Act. But other researchers have found the plan would increase total health spending.

Sanders estimates that based on the study, he would only need to increase government spending by \$17.5 trillion over 10 years to cover the cost of his proposal. But Medicare for All lacks many details leaving researchers to make various assumptions. Sanders was wrong to say that "Every study out there conservative or progressive says Medicare for All will save money". The Urban Institute for One estimated a Medicare for All plan would increase national health spending by \$720 billion in 2020. Federal government spending would

increase by \$34 trillion over 10 years. One reason the Yale and Urban Institute estimates are so far apart is the assumption on what the government would pay healthcare providers under Medicare for All.

The Yale study assumed hospitals would be paid at Medicare rates which are lower than private insurance payment rates. But the Urban Institute assumed the hospital rate would be 115% of Medicare rates, and it notes that even that may be politically challenging. If hospitals were paid 140% of Medicare rates, the Urban Institute said that would raise national health spending by \$951 billion in 2020. That's my fact check for this week. I'm Lori Robertson, Managing Editor of FactCheck.org.

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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 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. When Wichita Kansas nurse practitioner Michael Wawrzewski learned of the harsh and often fatal conditions that expectant mothers endure in Sub Saharan Africa, all because they live too far from a medical clinic, believing that every human being should have access to quality health care. He came up with a solution, Clinic In A Can transforming shipping containers into fully equipped mobile clinics and operating rooms that can be shipped anywhere in the world.

Michael Wawrzewski: When you walk in the inside you will believe or think that you're inside your doctor's office or inside at the clinical environment for which maybe you're in an emergency room or an ICU unit.

Margaret Flinter: Wawrzewski learned from his early iterations that gas powered generators can be problematic in low resource areas and switched all of his portable clinics to solar power.

Michael Wawrzewski: There is no part of the world that does not have sunlight and so solar power has become the cornerstone so that now every piece of equipment including the air conditioners we can run it off of 500 watts of electricity, which means six solar panels on the top and eight batteries is enough to run a clinic for 18 hours.

Margaret Flinter: Clinics In A Can have been delivered to war torn Sudan to earthquake ravaged Haiti and more recently to Santa Rosa, California, an area

decimated by the wildfires that also destroyed the main community health center there. Santa Rosa Community Health Center CEO Naomi Fuchs says that the portable clinic provided a lifeline for her patients in the wake of the disaster.

Naomi Fuchs: These are converted shipping containers that arrive fully equipped as a medical exam room.

Margaret Flinter: The clinics are designed to support workflow and to become a permanent fixture in low resource areas serving as long term primary care centers as well.

Michael Wawrzewski: A containerized clinic is something that's a turnkey. We equip it with the best equipment and we ship it as a completed project that once on the ground within 20 to 30 minutes or so is ready to be used.

Margaret Flinter: Clinic In A Can clinic a professionally outfitted shipping container fully equipped with medical and surgical equipment ready for deployment anywhere in the world where disaster strikes providing quality state of the art medical facilities in a low resource area. 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.

Margaret Flinter: 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 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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