Hello and welcome to Columbia Public Health Now, a podcast devoted to exploring the local and global implications of public health challenges in our communities. This Spring, we are focusing the series on the novel coronavirus, otherwise known as COVID-19, and its impact on our world and our health. I am your host Maria Andriella O’Brien and I thank you for listening.

When we look back on the COVID-19 pandemic of 2020, what will we remember? Will the story be about the success – or failure – of our health systems? In the United States, could the story be about a bi-partisan approach that brought the country together? or will it be about government dysfunction that further divided it? Will we – as public health practitioners – have been successful in communicating the information that people needed to protect themselves and their families? Will communities have banded together to support the most vulnerable during this crisis? In sum, what will we learn from this experience? And once we get past the first few years after this epidemic, will we continue to remember those lessons – or fall back into our usual routines and complacency?

Dr. Wafaa El-Sadr, a University Professor of Epidemiology and Medicine at Columbia University, knows a lot about epidemics, health systems and people. She worked in Harlem Hospital in the 1980’s as the HIV epidemic exploded in the United States, and was at the forefront of advocating for the communities and families most impacted by the disease. As director of ICAP at Columbia, she oversees projects in more than 30 countries with a focus on health systems strengthening. And if that weren’t enough, she also leads the infectious disease epidemiology unit at Columbia’s Mailman School of Public Health. If we want to consider lessons learned from previous epidemics, she’s the person to talk to. Dr. Wafaa El-Sadr, thank you so much for joining us.

Thank you.

Over the course of your career, you’ve had a great deal of experience with infectious disease outbreaks, whether it was the beginnings of the HIV/AIDS epidemic in the 80’s or the Ebola outbreak of 2014. Can you offer us some perspective of what we should be expecting in these early days of the epidemic and what’s to come?
DR. WAFAA EL-SADR

Thank you very much for this very important question. I do think there are, when we look back to the initial identification of HIV and the Ebola crisis in West Africa, and think back about our responses, there are lots of lessons learned—and that’s really important. It’s important to also appreciate that we have a pathway, and a trajectory, and a way of tackling such outbreaks. I would say some principles are very important to keep in mind. First of all, we need to disseminate information like we’re doing today regarding what’s going on, and to disseminate information very frequently because in the early phases of such outbreaks, things change and some of the information that are available that might be available on day one could change by day two or day five or day ten. So, it is expected that things will evolve and it’s expected that things will change and therefore it’s very incumbent on all of us in public health as well as all of us in the global community to await and be informed of this evolving information. So, I think that’s very valuable as a beginning. I would say, probably, most importantly, is this frequent communication but also really believing strongly in the source of your information, to be very careful to identify reliable sources of information. There are lots of information out there that are not reliable—they’re actually wrong! And it is really critical to make a decision to select reliable sources of information and then to go back to those sources to get updates. For example, in the context of the coronavirus outbreak, I would say the CDC is a valuable source of information, local health departments are a valuable source of information, and then hopefully this podcast is also, from experts from public health, quite valuable as a reliable source of information.

MARIA ANDRIELLA O’BRIEN

If we were to compare this to the Ebola epidemic in West Africa in 2014, does this being a respiratory illness make it more challenging for containment purposes?

DR. WAFAA EL-SADR

Yes, I think there are differences between Ebola and the coronavirus and some of them make the response to corona easier and some make it more difficult. Clearly, Ebola was transmitted differently. It was largely through blood and body fluids and so on, while coronavirus is respiratory transmission which means that coronavirus is more infectious, it’s easier to transmit between people. But, on the other hand, the good news is that while Ebola has much higher mortality, is much more deadly, than coronavirus that also makes it much more reassuring when we think about coronavirus. Keep in mind that 80% of people who get infected with coronavirus
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will have a mild, moderate illness. Some people may have such a mild illness that they may not know that they got infected. It’s only a small minority that will have a severe illness that requires hospitalization or other more intensive kinds of interventions. So, I think while it’s more transmissible, meaning more people are likely to get infected, on the other hand the good news is most people will recover easily and without any complications from coronavirus.

MARIA ANDRIELLA O’BRIEN

As we look across the globe, and even within our own country, state to state, we’re seeing a wide range of responses. What tends to influence government decision-making?

DR. WAFAA EL-SADR

The response to the coronavirus outbreak has varied substantially by country and it’s driven largely by the status, the situation itself—how many cases have been reported within this specific country, as well as what the resources they have at their fingertips at that moment in time. So, for example I can think of the one extreme which is what happened in China where China had an explosive outbreak with tens of thousands of people affected and hundreds of thousands who had contact with this virus. So, they had to go to some extreme measures, which means the lockdown, closing schools, businesses, mass transit, isolating people who had the disease in specific hospitals and so on. So, that actually was their approach and to their credit they have been quite successful. And now the outbreak has been largely under control in China. At the same time, you can think of another country on the other side of the spectrum—and the beginning of the outbreak in United States. And initially, when there are few cases, then the public health workforce seeks to find those case, quickly identify who has the disease, quickly isolate them and then of course quarantine their contacts. And you can do that while the numbers remain small. At the same time, what happens is that often then the large number of cases overwhelms the public health workforce and that’s when you need to go to more of the social distancing kind of interventions like, for example, asking people not to congregate, to avoid crowded spaces, to start closing movie houses and social events and so on and so forth. And then throughout out it all it’s really important to practice good public health practices that everyone has been hearing about, which is to stay home when you’re sick, wash your hands frequently, don’t touch your face, and so on and so forth. What comes to mind, is an image that I saw from Rwanda, small country in central Africa. And, in Rwanda what they did is they took this very seriously, and they actually have positioned portable hand washing locations by the big, major bus stops—in a way to motivate everybody who’s about to get on the bus to wash their hands. So, I think there’s a piece of the response that requires everyone to participate,
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everyone has a role to play, and I think that’s why we are now talking about having more of these individual behavioral types of interventions.

MARIA ANDRIELLA O’BRIEN

What do you think of the U.S. response so far? Where have we lagged behind? What have we done right, and would should be our next steps?

DR. WAFAA EL-SADR

The U.S. response has been, in some ways right on target, and in some ways has not kept up with the evolution of this outbreak right here in this country. It also has varied substantially from locality to locality and that’s one of the complexities of trying to deal with this outbreak. Some of the good parts of the response has been the guidance of the CDC, which we should all be following, across all of the states, across all of the communities. I think, then, that localities have had to adjust to their own situation and in some localities and communities, there’s a good public health infrastructure, and a strong foundation of public health so it’s possible to test people, to identify them, to isolate them and so on. But unfortunately, in other parts of our country, there has been a disinvestment in public health—meaning there are health departments that have maybe one or two workers and it’s impossible for a health department that’s covering a whole state that has just a couple of people to be able to handle this outbreak. That’s been the challenge is that we have, in a way, not invested in the public health infrastructure and we are now reaping the consequences of this. And what do I mean by this? I mean health departments—making sure that they have the resources, the staffing, to be able to respond in the event of such an outbreak. As we know, there are health departments in this country that have sufficient resources, and there are others that have maybe one or two people. That makes it very difficult to ramp up and respond to this emergency. I think that’s been part of the limitations and also this has been a shortcoming of the U.S. response.

MARIA ANDRIELLA O’BRIEN

Is that a bit cyclical to the U.S. mindset? For instance, after the HIV epidemic in the 80’s, was there a push to ramp up public health infrastructure that maybe decreased over time as people got complacent?
Well, public health in many ways, and what public health does is invisible largely to the population. It’s critical but it’s invisible. And, unfortunately what we’ve done here and what history has repeated itself again and again is that we pay attention to a problem, like for example TB outbreaks in the early 90’s, and then once we have that issue under relative control, we shift our focus to something else. And, of course, what happens is predictable often whatever the condition was, it will rear itself up again and increase again and come back. That’s why it’s very important, between these outbreaks, between these urgent public health issues, we have to sustain and maintain the infrastructure that’s needed to prevent these from happening again.

This needs bipartisan support, clearly, for that to happen.

In order to invest in public health, everybody needs to realize how important it is and to push very hard to get the resources that are needed. That includes bipartisan support, it includes local support, it includes the U.S. population believing in how important this is and demanding it.

Turning a bit more to the actual experience of infection, what is it about the coronavirus that makes it so lethal for certain groups?

What we know now, and based on the experiences largely in China, and in Europe now is that coronavirus affects people differently. For young people, it’s largely mild illness, largely mild illness. However, for certain groups of the population, particularly elderly and those with other medical conditions, they can unfortunately have severe manifestations, severe illness and many will need intensive care and so on. Why is this the case? This is not unusual. I think overall, we do know people who are older, their immune system gets weaker by age and therefore it’s not unusual that elderly people will be more susceptible to infections. We also know that people
who have other medical conditions, like they have maybe they’re on immunosuppressive drugs, maybe chemotherapy, or other clinical/medical conditions, they’re also more susceptible to complications of any infection. So, it’s not unusual that we’re seeing this kind of severe manifestations in these subsets of individuals. And, this means that we have to take particular care for these populations not to be in contact with potential coronavirus, and if they develop any symptoms to make sure that they seek medical attention as soon as possible.

MARIA ANDRIELLA O’BRIEN

Is there any evidence yet showing that people who have recovered are now immune? Or is there a possibility of reinfection?

DR. WAFAA EL-SADR

We don't know the answer, definitively, as to whether a person who has had an episode of this coronavirus would be immune or not. In all likelihood, the answer is yes because that's the same situation with other coronaviruses but we don't know that for sure. If people who get infected become immune, then that would be excellent news since it means that the majority of people have a mild, moderate illness, and hopefully all of them become immune, then that will actually be a silver lining to having had an episode of COVID-19.

MARIA ANDRIELLA O’BRIEN

This must be a uniquely tense, or difficult, moment for healthcare workers who are having to work with a disease that they don’t know and that we’re still trying to understand. What should the average person know about their experiences to help them work with healthcare professionals during this time?

DR. WAFAA EL-SADR

When I think of healthcare workers trying to cope with COVID-19 now, it reminds me very much of the early days of HIV when we didn’t know what it was. I was here in New York, trying to take care of patients at a time when we didn’t even know it was a virus. We had no idea how it was transmitted, there was a lot of fear and anxiety about this new disease and I remember distinctly watching young people die from this unknown disease. Nonetheless, I think what was really important then, as a healthcare worker, is to continue to be committed to taking care of people
who are affected with as much as diligence, and care, and sensitivity as possible. When I compare what we knew then, versus what we know now about COVID-19, it’s completely different. For HIV, it took us years to figure out that it was caused by a virus. Fortunately, with this outbreak, it actually took about a week for Chinese researchers to identify the virus—that’s fantastic! It took them another two days to actually identify the structure of this virus, that’s amazing. It took us a long time to do that for HIV—years and months—to figure that out. So, I think the rapid evolution of the knowledge is so encouraging because that means we have a test, we can diagnose this virus because we know it, we know what it looks like, we know how to develop a test for it. Also, it opens the door of identifying treatments for it because knowing what is causing the disease, and the structure of the virus, means you can find the right molecule, the right drug that may actually be able to treat it. Then, also it opens up another door which is to identify hopefully vaccines that can protect people from getting this virus, so the rapidity of the discovery and the science is stupendous and I think that’s a fantastic and reassuring development as well.

MARIA ANDRIELLA O’BRIEN
For many people, this is an anxious and even scary moment. Any thoughts on how people should maybe approach this moment in time?

DR. WAFAA EL-SADR
I recognize that it is a very tough moment for many people, both here and around the world. I think what’s most scary is the unknown, and usually I say, the more you know about something, the less scared you are. So, I would invite people to learn as much as possible about what’s going and to stay informed, particularly from reliable sources like I mentioned again, and again, and again. Because knowledge is power, and knowing how to protect yourself is very powerful and knowing how to minimize your risk is very powerful and knowing that the vast majority of people who get infected will have a mild/moderate illness with no consequences is very important. It is really incumbent on all of us, we have a role to talk to our families, our friends, our colleagues to also give them the correct information so they can actually also be able to overcome their fear and learn how to protect themselves.

MARIA ANDRIELLA O’BRIEN
How do you think this is going to play out in the coming months?
DR. WAFAA EL-SADR

It’s really unknown in terms of the trajectory of where are we going with this pandemic and it’s going to vary by country around the world depending on where they’re at now. We’ve seen stabilization in China—very good news in a country that has tens of thousands of cases. We’ve seen control in a country like Singapore, for example, because they mobilized quickly and they were able to do the right thing very quickly. I think it’s really dependent on the public health response in the various countries around the world, including in the U.S. and the mobilization of the response is very critical.

MARIA ANDRIELLA O’BRIEN

Thank you very much, Dr. El-Sadr. This has been very helpful for us and informative for our audience.

DR. WAFAA EL-SADR

Thank you.

MARIA ANDRIELLA O’BRIEN

Columbia Public Health Now is a production of the Columbia Mailman School of Public Health in New York City. Visit: mailman.columbia.edu/podcast for more information on our show. Share your comments on social media with #PublicHealthNow. I am your host, Maria Andriella O’Brien and thank you for listening.