

International Horizons Episode 15: Keeping Count of the Coronavirus
TRANSCRIPT

John Torpey 0:00

Hi, my name is John Torpey, and I'm Director of the Ralph Bunche Institute for International Studies at the Graduate Center of the City University of New York. Welcome to International Horizons, a podcast of the Ralph Bunche Institute that addresses a range of issues of significance around the world. Today's topic is "Keeping Count of the Coronavirus". We're fortunate to have with us today leading demographer and epidemiologist Dr. Sam Clark of the Ohio State University. Dr. Clark's research focuses on the demography of Africa on fertility and mortality rates and on improving the statistical tracking of disease in the world today, in part through his involvement in the organization Vital Strategies, with former Director of the Centers for Disease Control, Dr. Thomas Frieden. Thank you very much for joining us for today's conversation on International Horizons, Sam Clark.

Sam Clark 0:59

Thank you for having me.

John Torpey 1:01

Pleasure to have you. Appreciate you taking the time.

So, I want to get into an issue that's troubled me a lot as the coronavirus pandemic has unfolded, and it has to do basically with the statistical reporting of what's going on. I don't know about you, but I often find the reporting of the coronavirus unhelpful in the sense that it tends to rely on absolute numbers that sound big and scary, which in fact, of course, they may be, but don't really allow us to compare states in the United States with one another or to compare countries with each other. How do you think the media are doing when it comes to reporting the impact of the pandemic, and how could they do better?

Sam Clark 1:46

So I think the issue you just brought up of comparability is a key detail that the media is often gliding over, but I think it results from two competing communication interests. One is communicating the overall magnitude of the mortality that's going on. And that requires that you speak about absolute numbers of deaths.

And the second one is, is really being able to compare, both through time and across space, in an adequate way to track the epidemic and get a sense of how one region is doing with respect to another region. And in that case, you really need rates with a reasonable denominator, so that you can compare fairly across different times or regions. And that's where the media is really for the most part, I think, having a challenging experience. And it's also less maybe it's less juicy, and it requires more nuance to explain what you're doing. So yeah, there's a whole variety of successes and failures with looking at rates

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John Torpey 3:03

Do you think that they kind of draw on the right people for expertise? I mean, it's sometimes said that Anthony Fauci is a is an outstanding communicator of the kind of situation that we're in, makes it comprehensible to everybody. Do you think it's true? And is it a common phenomenon? And could there be other people? I mean, do they sort of begin to select certain people who are stars in effect and ignore other voices?

Sam Clark 3:37

So, I've been thinking about the way that we communicate the coronavirus epidemic to the public and over the epidemic. I've had a lot of experience with working at a very detailed level to generate new data and understand where the data holes are, and provide results to the kinds of people who would do the communicating. So, I've been doing that in the developing world with the WHO, and the Vital Strategies project where we look at civil registration, vital statistics, mortality reporting in general. And in the state of Ohio, I've been working with colleagues at The Ohio State University. And, as a group, we've been working with the Department of Health to generate better, more clear, and more meaningful data for the state of Ohio, characterizing the epidemic here.

And what has happened in the Ohio situation is that there is a real strong disconnect between experts like myself, who are working day and night basically to generate good data, and the administrative layer in the government that is responsible for decision making. And communicating with the public. I've spent almost all of my time in the data generation and model building exercise. And we do have interesting results to show. And what we're discovering is that it's very difficult to get the attention of our colleagues in the administration, who would be in a position to actually do something useful with those results.

So, this issue of communicating is really at the top of my mind right now. How do we get it into the right hands? And how do we help them generate a useful, constructive message for the public? So, to date, I'm pretty frustrated, in Ohio and nationally, seeing what's going on. The whole thing has been politicized in a very non-constructive way. And I think that this has resulted in a good swath of the public being both confused and misguided. So those are my initial thoughts on that.

John Torpey 6:09

Right. So, what you say it's hard to get the administrative people, and political people, I guess, to listen. What do you mean by that? And why? Why do you think that's the case?

Sam Clark 6:22

So, I'll give you a very concrete example. We spent about six weeks, some colleagues at the University of Washington and myself and a couple people here at OSU, developing an excess death model for the state of Ohio. And the purpose there is to get a sense of how different mortality rates are this year

compared to what they would have been at similar points during the year in past years, with the overall result being how many deaths are seeing now that wouldn't have occurred if the situation was normal as defined by the last few years. So excess deaths are a great way of looking at the overall effect of the pandemic, both the COVID-19 deaths and all of the deaths that are produced by indirect mechanisms. For instance, people who have chronic conditions like diabetes, certain kinds of cancers, and so on, you don't go into the hospital anymore to get their treatments, high blood pressure, and other things that might be happening in the other direction. So reduce traffic deaths, and so on. So to look at the overall effect, you really have to look at that all cause mortality.

So, we spent a great deal of time developing a good model, and we delivered our first results to the state about a month ago. And since then, we have heard absolutely nothing from them and seen no evidence that those sets of results were used in any way whatsoever, much less communicated to the public. And I can't talk about the actual numbers involved. But the results were illuminating, and I think it should have caused people to potentially take a good hard look, and just absolutely nothing happened. So, I think the reason for that is that our COVID-19 task force here in Ohio was a collaboration between the state officials, that was led very strongly by Amy Acton, who was our Director of Public Health here in the state. And she quit around that same time. And I think since then, we just don't have a sufficient leadership to really engage with things like this.

John Torpey 8:55

So, you kind of hinted at the results, but you didn't really say what they were. And did they perhaps lead to a certain lack of enthusiasm about engaging with them on the part of the people that you're talking about?

Sam Clark 9:14

So, I can't I cannot guess what they did, their reaction, because they really haven't communicated to me at all. But the results were certainly sobering and would have caused most reasonable people to really perk up and pay attention. So, I think the fact that they didn't is really odd. It's either that they don't want to confront those possibilities, or the whole thing is sufficiently overburdened or somehow confused about what's going on, but they can't act in the way that they did. It would maybe suggest they do. Let's see.

John Torpey 10:04

So, one of the other reasons I wanted to talk to you is that you're a demographer of Africa. And yes, perhaps even principally, and, you know, we pay a lot of attention to what's been happening in the United States, for obvious reasons, and Europe, perhaps China, but what used to be called the Third World is gets less attention. And so, I wonder whether you could talk a little bit about your work there. I know it basically had to do with trying to improve statistical record-keeping around excess deaths, or

mortality in any case. So maybe you can talk about exactly what you're doing out there and how that's going.

Sam Clark 10:48

Yeah. So, with respect to the situation in the developing world, what I've been doing over the last few years is focusing on trying to give us a better ability to measure the burden of disease, because that's really key to identifying and prioritizing public health interventions, and also monitoring whatever impact they might have in the future. And the burden of disease is really simple. It basically looks at deaths and categorizes them by cause, and puts those causes into meaningful groupings, and then ranks the meaningful groupings by how many people have died from each or what fraction of the population dies from each cause. So when you start thinking about that, in the developing world contexts, two things immediately crop up. One is the most of the deaths are not registered at all. So, the first step would obviously be to know that a death has occurred. And then the second step would be to figure out what caused that death. And so, in the second step as well, even for the deaths that are registered, most of them do not get a cause or a reliable cause.

So what I decided to do is focus on the cause part and work on the only feasible method for doing this, which is a thing called a verbal autopsy, which is an interview with the caregivers or other people who are around the person who died during the time leading up to death. And in this interview, you elicit a basically a description of what happened leading up to the death, whether or not the person contacted the medical system at all, if there were any diagnoses or test results, and things like that. So, you have an interview that consists of a bunch of questions and their answers, and also a narrative text, which is an account of what happened in the actual words of the respondent. So, the idea here is you use that information and essentially do a diagnosis after the fact as well as you can. And traditionally that was done by doctors reading the interview transcript, and eventually coming to a consensus amongst themselves as to what happened to the person. And, it works; it kind of works.

Okay, it works well enough to be worth pursuing. But there are lots of things that could be improved. And one of them is the fact that doctors are a scarce commodity in most of these settings. And it's much better for them to be spending their time with living people rather than pouring over the records of deaths. So, when you use the doctors, you have an opportunity cost kind of issue, which is really significant. You also have a cost issue because you have to pay them and you have a long delay in terms of getting the results.

So, several groups around the world, including ours, have developed computer algorithms, which are basically computational statistical devices that process those data and come up with likely causes of death in a similar way to the positions. So our job over the last, I don't know, 6, 7, or 8 years has been developing and improving those algorithms, working with the World Health Organization on the global standards for this verbal autopsy method, including the both the interview and the instrument itself: the questionnaire, and the computational methods.

And that's actually how I became involved with Vital Strategies, because they have a program to improve civil registration and vital statistics in general. So, both the death registration and the cause of death ascertainment, and I've been helping with the cause of death part for several years now. So that's

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the background and kind of the main thing I've been doing in terms of COVID-19. What we've done is with the World Health Organization for autopsy reference group, we have added new questions to our standard verbal autopsy instrument so that we can ascertain COVID-19 as a cause now, we're just at the point of wrapping up that process and disseminating the results. And the next phase will be building all of that into the computer algorithms. And then getting it actually fielded at various research sites and hopefully, various national governments as well. I'll pause there.

John Torpey 15:28

Okay, great. So that kind of leads into where I wanted to go in any case, and of course it has to do with coronavirus, and in particular, its career, if that's the right word in Africa. I've seen suggestions to the effect that perhaps Africa won't be so badly hit by the coronavirus because of the age structure of the population. That is to say that it's much younger, certainly than the European population, but even than the American population. And it's not to say lots of people won't get sick, but that they are less likely, in fact, to die. But of course, one would have to take into consideration the ability of the healthcare system to handle these people, etc. So, I wonder whether that's makes any sense as a conjecture or how you see the virus developing in the developing world.

Sam Clark 16:30

So, I don't have any hard and firm answers to that, but I do have some thoughts. The first one is that the developing world is highly heterogeneous. We have, you know, places in Latin America that cover the range from fairly underdeveloped to very developed. We have Africa which also covers a huge range, and we have, yet again, a different situation in parts of Asia. So, I'm going to focus on Africa, which is where I have enough information, I think to have intuitions about what might go on. And I think the critical thing to do is to think about the way this virus appears to be transmitted and its effect on different groups within the population.

So, we have something which maybe probably is airborne. Transmission is most efficient when you have people in close proximity and indoors, especially with indoor air that doesn't circulate very well. And populations that don't have access to masks. Then you have the fact that it affects people differently. Elderly people get it and die in fairly large fractions, and younger people get it but don't appear to die, in quite so many numbers. The problem is then thinking through how people mix in these populations. And if you have a situation where older and younger people are in close proximity to each other for large periods of time, especially indoors, then you're going to have a situation where there's a high potential of transmission from the younger to the elderly people.

That is what concerns me in the African setting. There are lots of household living situations that involve people of different generations living together or being in close proximity with each other for periods of the day. And so, I think there is a chance that the virus will circulate widely, and, in spite of the age structure, will infect a lot of elderly people who are at higher risk.

In other words, they won't be protected because they're not in a secluded little bubble, living by themselves, not in contact with the rest of the population. And here's an interesting link back to the first

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topic, we discussed the issue of numbers versus rates. In terms of in terms of rates, things in Africa will probably be as bad as they are everywhere else. And in certain, very close living situations like slums, in Cape Town and in Nairobi, might be worse.

But the thing is that Africa as a whole has a large population. So, when you apply even a moderate rate to that large population, you still have a very large number of deaths. And then an added issue is that Africa in general, will have a less developed way of keeping track of all of this. So the fact that I mentioned earlier where most deaths are unrecorded and most deaths don't have a cause, means that it's going to be very difficult to even get rudimentary data on the effect of the epidemic in many of these settings. So, I'm very, very worried about what's going to happen in Africa and most of the developed world, especially those places where we don't even have enough data to know what's going on in normal times. I think that the conditions are ripe for the epidemic to have a large impact and wind up killing a very large number of people.

John Torpey 20:42

I worried about asking how many you think that's really going to be, but I guess I'm wondering whether you could perhaps, put this in a kind of comparative context and compare it to other epidemics that you're familiar with, then give us a sense of whether you think how bad is this going to be? I guess is the question.

Sam Clark 21:15

So, I think the short answer is really bad. So, the other big epidemics that have affected Africa in an unusual way in the past few decades are Ebola and HIV. And then there are other things which affects some parts of Africa all the time. But in terms of comparison to Ebola, I would say this is has the potential to be much worse. And in terms of its comparison to HIV, I suspect, it's hard to say because HIV has a cumulative effect over many decades and has killed many people. This pandemic is likely to go through its course and burnout in a year or two, and it's hard to know if the cumulative number of deaths, as a result of that will be comparable, more or less than HIV.

So, it depends on how you're doing the comparison. Are you doing it a given year? Or over time, accumulated impact, but it's going to be very bad. I'm absolutely sure that it's going to be very bad. The question is, will the African countries in the international system that plays a large or significant role in provision of health interventions there, if together will be able to mitigate it to an extent or not? And that I think is the big question. We need the information and we need a mitigation strategy. And I haven't seen either of those really being highlighted yet.

John Torpey 23:06

How do you think that's likely to happen, insofar as it does happen? I mean, obviously, the United States has rattled its saber at the WHO, and that seems rather unhelpful at the moment. What are the kind of

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instruments and institutions out there that might carry out or at least develop the strategy that you're talking about?

Sam Clark 23:32

So, I think in most African countries, the Ministry of Health has to develop its own strategy. And I think the African CDC, as a multilateral organization, will probably play a leadership role in this. And I think that that's extremely good. And I have lots of colleagues in Africa who are extremely capable and can put together a strategy.

Again, I think it's similar to the situation the United States. I mean, are we going to have government officials and politicians who actually listen to and respect the epidemiological experts, or aren't we? I think it's going to hinge on that. And even in the best case scenario where the politicians, the governments cooperate and get in line to both listen to and then attempt to implement a mitigation strategy, the resources necessary to do that are again, of course, limited. They're limited here in the United States. And they're even more limited in developing countries. So, I think, that's even in the best case scenario, where a strategy was developed and an implementation was attempted.

It's not going to be optimal or perfect in any sense of the word, given all of the constraints that exist. But I'm not sure we're even going to get through the first step, because we fail to get through the first step even in highly developed places like the US, and in developing countries that are well along the way toward being developed, like Brazil. So, I guess political leadership really is probably the absolute key here, and we'll see what happens.

John Torpey 25:29

Well, we will indeed. But of course, it's certainly been noticed by lots of people that the current administration in the US has arguably politicized the science much more than anyone ever in the past. And that suggests that the only real way out of this is to replace the current political leadership in the United States. I mean, is there any hope if Donald Trump is reelected, that this can be resolved?

Sam Clark 26:04

Hmm. Yeah, that's a good question. My personal opinion is that it will be difficult to resolve this. If Donald Trump were to be reelected, I'm worried about that.

John Torpey 26:21

Right? Well, I share that worry. So, you know, another thing that occurs to me is the discussion of a vaccine just in the last couple days has seen some more promising results coming out of the US, out of the UK, out of China. And it's often said that this is not going to be resolved until there's a vaccine, but as many people pointed out, they're also going to probably be many. If there's any vaccine, there's

probably going to be a number of them. And there aren't enough of the world – at least initially going to be enough – for all the people who need them, with seven plus billion people on the planet.

And so I wonder whether there are other talks about mitigation. These are the non-famous, non-pharmaceutical interventions. But what about others, remdesivir and dexamethasone and other drugs that seem to moderate the course of the disease, and finding more medicines like that. I mean, how do you see the kind of questions of treatment, cure, etc., in terms of the way this is all going to play out?

Sam Clark 27:37

I think this is really interesting that this question has to be viewed from a global perspective. The entire globe is infected. So, searching for a way to really eliminate this pandemic is probably not the idea. What we have to do is slow it down, contain it, and live with it for quite a long time. And I think the strategy in that case needs to be everything possible. So, drugs that are able to improve the outlook for infected people, blunt the most harmful effects, you know, we have to explore, you know, and use all of them. And, you know, I think we are making good progress there. Vaccines definitely need to develop them. But the vaccine question to me is a little frustrating because vaccines are difficult to identify, they're very difficult to certify.

It typically takes years to get a vaccine certified by the FDA, and for good reason. They're highly biologically active agents, and they can kill you. They can cause allergic reactions that kill people and they can do that pretty reliably if you're not careful. So, you want to have a vaccine that is effective and specific for the condition you're interested in. And, really, above all is safe, so that when you give it to people, they don't get sick or die. So that takes time. And you have to be careful. And the last thing you want to do is put a vaccine out there, which has all these negative properties and doesn't really work and/or is harmful to people that would result in an even further diminishing of the public trust in science and biomedicine.

And I think politics around this all together. So, I'm worried about the vaccine. I'm worried about the amount of hope that people are sticking to it. And I'm worried that we're going to make a mistake in terms of bringing one out too quickly. But putting those things aside, obviously, a vaccine is a very powerful tool in the overall mitigation strategy. And if we did have a really good vaccine, the next step would be producing it and distributing it.

And that's where the global scale comes back in. We can't really treat this epidemic as a national issue, we really have to treat it as a global issue. Because really eliminating it is going to have to be done on a global scale, unless we want to lock down international travel and international trade from here to the duration. So even with a good vaccine, there's a huge and logistical undertaking in terms of producing sufficient quantities and distributing it and making sure that people outside of the rich countries have enough of an access to it, so that we eventually tamp down the whole pandemic globally, and don't just have a situation where we keep getting re-infected from reservoirs that are sitting somewhere else.

John Torpey 30:56

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So how do you think that problem is going to be addressed or resolved? Many people have pointed to the ways in which this set of developments has pushed a process of re-nationalisation or deglobalization, which does not foretell a kind of empathy towards those in other parts of the world that may be more vulnerable or may be suffering more. How is this going to actually get sorted out?

Sam Clark 31:27

Yeah, it's a good question, because, like you said, I think we have put ourselves on a course of potentially engaging less with the rest of the world. And I have a variety of thoughts about that. In one sense, what we've been doing roughly since the Second World War is stitching the world together economically and socially and in all kinds of ways, which are very useful except for a situation like this, where the interconnections are actually the route through which the disease is spread. So I think that just to implement anything on that scale, we have to cooperate internationally, and multilateral organizations like the WHO and the UN should play a prominent role in helping us do that. But our current political situation appears to be making it more difficult to implement organization at that scale.

So, I'm not hopeful. I'm not very hopeful about our ability to do that in the short term, especially with the current administration we have in the United States. And the fact that in general, the WHO and UN are underfunded organizations. They really don't have a lot of resources. They are very efficient in terms of roping in outside expertise and outside help. In fact, they basically run that way. So, people like myself, and many of my colleagues, actually conduct a lot of the work which is done by these organizations, but we're not paid for it. So all of that would need to happen on a on a bigger scale and quite rapidly. But we seem to be moving in the other direction.

John Torpey 33:36

Unless we do, and those are not the most encouraging thoughts to end on. But I want to do you want to wrap this up and say, that's it for today's episode of International Horizons. I want to thank Dr. Sam Clark of Ohio State University for sharing his insights about measuring the coronavirus pandemic in the United States and around the world and about the likely future that faces us in the face of the pandemic. I also want to thank Hristo Voynov for helping on the technological side. This is John Torpey of the Ralph Bunche Institute for International Studies, saying, see you next time on International Horizons.