

Episode: Ethics Talk – Fighting Global HIV/AIDS During the COVID Pandemic

Guest: Chris Beyrer, MD, MPH

Hosts: Tim Hoff; Audiey Kao, MD, PhD

Transcript by: Cheryl Green

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[bright theme music]

TIM HOFF: Welcome to *Ethics Talk*, the *American Medical Association Journal of Ethics* podcast on ethics in health and health care. I'm your host, Tim Hoff. This episode is an audio version of a video interview conducted by the Journal's Editor in Chief, Dr Audiey Kao, with Dr Chris Beyrer, the Desmond M Tutu Professor of Public Health and Human Rights at the Johns Hopkins Bloomberg School of Public Health, about the challenges facing the US President's Emergency Plan for AIDS Relief, better known as PEPFAR, during the COVID-19 pandemic. To watch the full video interview, head to our site, JournalOfEthics.org, or check out our YouTube channel.

DR AUDIEY KAO: Dr Beyrer, thanks for being a guest on *Ethics Talk*. [music fades out]

DR CHRIS BEYRER: Thank you, Audiey. Good to be with you.

KAO: So, to start, what do you see as the most pressing global health equity challenges confronting PEPFAR?

BEYRER: Well, right now, of course, as we all know, we're facing this very stark, an ethical dilemma, a human social justice dilemma, and obviously also an epidemiologic one, which is, of course, that so many of the PEPFAR-focused countries either have very limited access to COVID vaccines or they have access, but only to vaccines that really don't appear to be providing sufficient protection against the Delta variant. So, we're in a very painful and challenging moment, I think, where we have vaccine surplus in the US. We actually have, as you know, many Americans who are not either willing or yet ready to be immunized. And so much of the world, particularly sub-Saharan Africa, has essentially almost no vaccine. It's not even enough for their health care workers. So, that's an enormous challenge.

And the position of PEPFAR, at least until now, has largely been the insistence that those PEPFAR funds stay in their lane, so in other words, be used for HIV and not to help address this COVID epidemic. And I think that that's enormously challenging because obviously, all countries, including our own, have had to go through all kinds of accommodations to try and fit programs. What you see when you look at this on the ground and talk with people who are involved and providing clinical care or trying to keep going with HIV programming is that there's been a lot of innovation and a lot of effort to try and maintain patients already on antiviral therapy on therapy and not have treatment interruptions, which everybody knows would be a disaster for those individual patients and also very bad for the trajectory of the epidemic. So, there's been great effort, and we really have to commend people in very challenging situations doing everything they can to maintain people on therapy.

The biggest hits have really been to those kinds of procedures or programs that you would call elective. So, the same here, right? People put off elective screening, elective

procedures, elective testing. And so, you see what appear to be much bigger problems with things like HIV testing. So, that got put off. With prevention, with pre-exposure prophylaxis. We have seen a spike in unwanted or unanticipated pregnancies for the same reason: contraceptive access declining. Other childhood immunizations, COVID aside, also heavily affected and in decline. So, I think that those issues taken together really mean that people have had to limit particularly the preventive aspects.

And, you know, we were already in trouble with HIV prevention before COVID. So, 2020 was supposed to be the period, the year, that we were going to meet these very important targets that the UN had set and the world had agreed to about declines in new infections. The goal was to have fewer than half a million new HIV infections a year. We were way above that. We were closer to 1.7 or 1.8 million new infections before COVID. So, HIV incidence remains an enormous challenge.

KAO: So, as you've talked about just now, PEPFAR has a single focus on one disease.

BEYRER: Mm.

KAO: The COVID-19 pandemic has raised tensions between having a laser focus on HIV and a broader focus on building health systems in PEPFAR partner countries. How should this tension be addressed?

BEYRER: Yeah, yeah. Well, I think the first thing to say is that the counterargument, of course, is that the investments in PEPFAR, even though it's a single disease, did have some positive spillovers for those health systems. And you see that really nowhere more clearly than, for example, in laboratory infrastructure, because there really was very limited ability, for example, to do HIV viral loads in Africa. There was an enormous investment in building that laboratory capacity. It turned out to be very important, for example, for Ebola in some of those PEPFAR-focused countries. And that was able to pivot very quickly to COVID. In fact, one of the arguments that is often pointed to was the West African outbreak of Ebola in Liberia and Sierra Leone and Guinea some years ago, none of which were PEPFAR-focused countries and where the laboratory infrastructure and the public health infrastructure had really not been invested in because it was not a PEPFAR-focused country. So, I think there have been some benefits. But there's no question that AIDS is also changing, and there are new challenges.

So, the first thing, of course, is that once you introduce antiviral therapy, which PEPFAR did so magnificently with the partner countries, people live longer. And now, of course, you have all the complications of aging with HIV disease and all of the chronic underlying conditions that emerge: the cardiovascular complications, the metabolic complications, the neurologic complications. And those patients—and the malignancies—those patients are living longer, and they are adding to the NCD burden of the countries. And it already was a tension, again, before COVID, that many countries have embraced the idea of UHC, universal health coverage. When Tedros became Head of the, Tedros Ghebreyesus Adhanom, when he became head of WHO, this was one of the things he said in his opening greeting to all of the members of the WHO staff, which is that whatever other job you have been doing for WHO, you are now working on universal health coverage, right, universal health care. That UHC is the motivator.

Well, UHC is very, very different from a vertical program. And the US was in the position of really not agreeing to support UHC as a goal, even though I think all of the science and all of the public health policy would suggest it's the right thing to do, because of concerns that

we would be asked to fund it, right? And of course, this is not a commitment we have made to our own citizens. We are the only [chuckling] industrialized nation that has not made that commitment. And so, how do you sell that to the Congress, that you're going to support universal access to health care in Uganda and not in Mississippi? That's a very tough sell.

KAO: That's a naughty public policy and politics issue, no doubt.

BEYRER: Really.

KAO: So, among Africa's 1.3 billion people, only about one percent of the population are fully vaccinated against COVID-19. What are the risks and benefits of leveraging PEPFAR in getting COVID-19 vaccinations to countries where the vast majority of their populations remain unvaccinated?

BEYRER: Yeah, yeah. Well, I guess, first of all, I would start with the benefits. And the first and most important benefit is clearly that there are an enormous number of people all over those African countries who have been working for PEPFAR and who have been making this program possible, and those health care workers deserve protection. They absolutely need protection. And the idea that we would not support, somehow, vaccine access for those people, I think, is really a problem. And because you already have the PEPFAR platform and you've built it and you paid for it and you have all of these people—the drivers, the nurses, the counselors, the data people—it just seems an enormous lost opportunity not to use that infrastructure.

The second benefit is that, of course, those people are providing services to people living with HIV and their families and to people with, in many countries, also with TB. They are a priority population for immunization. That also is an important part of the mix. And now, again, you have this infrastructure, you have this access, people know where these folks are. So, it seems to me an opportunity that you would not want to miss.

Third reality is that, and benefit, is that PEPFAR has often been seen, and Secretary Clinton, when she was Secretary of State, made this point, I think, very eloquently, that it really is both soft power and smart power, right? And it is one of the most popular programs, really, in foreign policy. It's an enormous success from a foreign policy perspective. So, why would you not want to maintain that goodwill and say to your PEPFAR partner countries, "We're with you. We know this COVID pandemic is a problem, and we're going to do everything we can to help all of us get through this."

I think the last benefit, which is one that, in some ways, is more self-serving for the US, but which is very clear in terms of the science, is that if you leave enormous proportions of humanity unvaccinated and you have that many susceptibles out there, this virus is going to keep evolving as it is very rapidly now. It will continue to generate variants of concern. And what keeps us up at night, those of us working on the COVID vaccines and on HIV, is that eventually, variants will emerge that can bypass the current generation of vaccines. So, it is a true public health truism at this point that we are all in this together, and we really need to immunize everybody. And by everybody, we mean everybody [chuckles] to get out of this.

KAO: Right.

BEYRER: Now, on the risk side for PEPFAR, certainly what people are always worried about is that it's so easy for a very successful, focused program to enter into a larger space with many other players, ministries of health, less ability to control, and you lose focus, you lose mission, you have mission creep. And maybe in some settings, to be honest, we have some very corrupt and incompetent governments. So, when you get out of your vertical silo and start working in that space, you can also lose funds and lose resources. And we've already seen, unfortunately, emerging in COVID, for example, the sale of fake vaccines, the sale of substandard PPE, all kinds of challenges with weak governance and with corruption. So, that is a risk, certainly.

I guess the other risk is more of a purely political one, and that is that the Congress remains supportive of PEPFAR. It has been refunded every five years since George Bush's day, since the founding. It remains one of the few areas left, really, in development where there is genuine bipartisan consensus in the Congress. And I think that part of the reason for that laser-like focus has been that the Congress really likes to see the outcomes and the reporting of PEPFAR. And it has been very data driven. Certainly, under Ambassador Bix, that was a huge part of her focus, was to increase both the data quality and quantity and reporting time. And so, that is also a risk.

But to me, you know, we always have to, and this is the dilemma of all ethical dilemmas, right, you always have to balance the risks versus benefits. I would say that we definitely are on the side of the benefits of leveraging the PEPFAR investments in infrastructure to help these countries deal with COVID. I think that that, it seems to me, is pretty squarely where I at least have landed.

KAO: So, as we near the end of our conversation, I want to switch gears and ask you about the unprecedented speed in which COVID-19 vaccines were developed, tested, and made available.

BEYRER: Mmhmm.

KAO: As you alluded to, there is still no vaccine against HIV. What lessons can be applied from COVID-19 vaccines to the creation of a safe and effective HIV vaccine?

BEYRER: Yeah, yeah. Well, it's a great question, I have to say. So, one.... And I've been asked a number of times: "So, why is it that we got to a COVID vaccine so quickly, and we're still struggling with an HIV vaccine?" And fundamentally, it's the difference between the viruses, right? It is the difference between the pathogen. And in the case of COVID, and indeed perhaps other coronaviruses, we have an advantage over the virus in that it has a very clear antigen, the spike protein, that is the binding site for human cells, with the H2 binding site, the receptor site. And that has met all the current vaccines. The mRNAs, J&J, AstraZeneca, the Chinese vaccines, they're all aimed at the spike protein. So, that, and in the case of HIV, of course, the antigenic sites have been elusive, unfortunately. And of course, it has this slippery glycoprotein coat that makes it very tough to develop antibody. So, there really is a difference in the pathogens.

But I think one of the clear outcomes and spectacular successes of the COVID vaccine effort has been the, finally, you know, the benefits of the messenger RNA technology. And mRNA is here to stay [chuckles], and mRNA is going to be used in many other disease systems. It's likely to be used for cancer, and there already is early work going on. There's already been first-in-human trials of an mRNA vaccine product for HIV. So, that's really encouraging.

We also, you know, in parallel with the HIV vaccine effort has been a lot of work going on in the broadly neutralizing antibody arena, the bNAbs. And of course, we just had the AMP trial, which was a proof-of-concept of the first generation basically of these broadly neutralizing antibodies. It was called BRCA1. It was developed at the Vaccine Research Center at the NIH. But that technology actually was also very helpful for the bNAbs for treatment of COVID and for prevention of COVID. So, the people working on broadly neutralizing antibodies in both disease spaces are, many of them, are the same people. But there's a lot of dialogue going on. There's a lot of scientific exchange. And that may be an important arena as well.

I have to say that what HIV brought to the rest of infectious diseases was rational drug design and antivirals, right? And we have had spectacular success with antivirals. Those helped lead to the antivirals for Hepatitis C. And I think that that area has been profitable for so many others. But it is really challenging to, still, to look at the HIV vaccine field, recognizing that this is a virus that is immunotropic—that's why it's called the immunodeficiency virus—and it undermines the immune system. And that is its pathogenesis. And that, I think, has been fundamental to why induced immunity has not been able to get control of it.

KAO: So, on that note, I want to thank Dr Chris Beyrer for sharing his expertise and insights with our audience today. Chris, thanks again for being a guest on *Ethics Talk*.

BEYRER: Thank you so much, Audiey. I've enjoyed speaking with you. And I hope we get progress on resolving this ethical issue with COVID vaccines. We can't leave a billion people unimmunized.

KAO: Yeah. Well said. For more COVID ethics resources, please visit the *AMA Journal of Ethics* at [JournalOfEthics.org](https://www.journalofethics.org). Thank you for being with us today. We'll see you next time on *Ethics Talk*. [bright theme music plays]