Think Global Health

Former president of South Africa Nelson Mandela visits the township of Khayelitsha in Western Cape, South Africa, December 2002. Media24/Gallo Images/Getty Images

by Mary Brophy Marcus January 27, 2023

Quarraisha Abdool Karim, professor in clinical epidemiology at Columbia University, and president of The World Academy of Sciences, spoke with Think Global Health about the arc of HIV/AIDS-fighting efforts in South Africa, her home country. She also discussed her research and leadership over the past thirty-four years, how PEPFAR and the Global Fund have altered South Africa's health landscape, and the final lap in the battle to eradicate HIV/AIDS.

Think Global Health: Your career as an epidemiologist and health leader in South Africa and globally has spanned three decades. Can you share some of the milestones in your professional life and South Africa's fight against HIV/AIDS along the way?

Quarraisha Abdool Karim: I started doing AIDS research in 1989, and I did one of the first population-based surveys that year. It was published in 1990. That was an important milestone—it was the beginning of my research in HIV. In 1989, when I was planning these population-based surveys, in South Africa, people didn't think they would see democracy in our lifetimes. I had just trained at Columbia University and was exposed to the AIDS epidemic in the United States through my classes. Returning to South Africa, I was looking at applying some of that knowledge that I had garnered in the United States. The big gap was that we had no idea what the nature of the HIV epidemic in South Africa was.

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So I did this population-based survey that was piggy-backed with the active malaria control program. And that highlighted that we were at a very early stage of the HIV epidemic in the general population. We found that women were infected two to four times more compared to men. So, what followed was me trying to monitor the evolving epidemic. What we were dealing with in 1990 was the silent spread of HIV—not AIDS, as we saw in East Africa, West Africa, and even in industrialized countries.

Think Global Health: When did HIV/AIDS become an epidemic in South Africa?
Quarraisha Abdool Karim: I was recruited to set up South Africa's national AIDS program [in the early nineties] and by 1995-1996, we were seeing a lot of AIDS and the rapid spread of HIV. At that time, I was a member of the Governing Council, at the African Academy of Sciences. I posed the question, "Why is it that we have not had an AIDS conference in Africa, when we have most of the patients here?" And the response was, "Well, we've never had anyone make the request." So, I discussed this with different people and it happened—the International AIDS Conference was held in Durban, South Africa, in 2000.

Two years before the conference, we started to see a change in the HIV epidemic. Initially, we were seeing the impact of mother-to-child transmission. Infants were dying within the first year of life. It was around 1997 when we started to see this change and the deaths in infants repeated, and more hospital admissions. At the same time, we saw the results of the ACTG 019 trial [which showed that azidothymidine (AZT) delayed the onset of AIDS in people with HIV who were asymptomatic, the first time a treatment for HIV infection was demonstrated].

The demand for interventions to prevent mother-to-child transmission was growing. We started to see an increase in adult deaths—patients dying from AIDS. And we're watching the United States and seeing the benefits of antiretroviral treatment not available in Africa. The best we could do in many of our countries was treat the opportunistic infections.

Think Global Health: Did you have the support of your government leadership at the time in South Africa?
Quarraisha Abdool Karim: In 2000, when we had the AIDS conference, we also had a new president that year, Thabo Mvuyelwa Mbeki, and he was questioning if HIV causes AIDS at a time when grandmothers were weeping about the multiple children they'd lost to AIDS. There was sickness all around you.

We were facing denialism from the president and the minister of health, who had no interest in making information [for prevention or treatment] available on the airwaves. And without the government's support, HIV drugs were too expensive—unaffordable.

But the day before the opening of the sixteenth International AIDS Conference in 2000, as a scientist and activist, I saw a real show of global solidarity highlighting the issues around equal treatment and access. I have to say, a few years later, PEPFAR was set up and the Global Fund, and I think it was directly linked to this visibility of the damage in Africa. People in leadership outside of Africa, and in Africa, saw the importance of treatment access, and those two mechanisms were set up to facilitate that.

Think Global Health: What did PEPFAR and Global Fund support look like when it came to South Africa?
Quarraisha Abdool Karim: It was to me, more of a moral obligation than anything else, which is unprecedented when we think about public health. The difference between the Global Fund and PEPFAR is that Global Fund worked with governments—and it was a mixed bag of governments in Africa, some happy to work on HIV and some not, including in South Africa. The Global Fund was just in this endless negotiation with the government, which didn't even believe in the cause.

I think that's where the difference in PEPFAR came in. PEPFAR said, "We're working with the NIH-funded projects, we're working with NGOs, and not necessarily directly with government." So, we were immediately able to start providing antiretroviral treatment to patients in the communities we work in. We did also get Global Fund support, but it took me two years of government negotiations before the funding became available and before the government put this as a high priority.

Both mechanisms are important. Both were about solidarity. One chose to work with government, one chose to work with whoever is ready to work—academia, NGOs—and they were very creative. Drug prices came down. I think it made a huge difference.

PEPFAR also took a very data driven approach which meant that their responses would be prioritized based on data, and then they would expand that as more and more evidence became available in terms of what was happening in a country. That gives a sort of synopsis of the entirety of PEPFAR and Global Fund in South Africa in particular, and to some extent in Africa.

Think Global Health: You've worked now for more than thirty years on HIV/AIDS initiatives. Have you accomplished what you'd hope to do at the start?
Quarraisha Abdool Karim: We have to keep reminding everyone that we're not over with HIV. And neither are we over TB nor malaria. With HIV, the challenge has been on primary intervention of HIV infection. I think the initial concentration on test and treat hasn't quite translated to population-level benefits. Make no mistake, we have been able to really turn this

epidemic around in terms of people living with AIDS and HIV, in terms of the millions put onto treatment, in terms of the infrastructure, in terms of monitoring therapeutic success, in terms of strengthening health-care delivery systems, and in terms of educational programs put into place. We've made a massive, massive impact and close to elimination of mother-to-child transmission.

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Think Global Health: COVID threw a wrench in health-care access and services everywhere. How has the pandemic affected people with HIV in South Africa?
Quarraisha Abdool Karim: With COVID, we saw what typically happens when you have a new epidemic; you drop the ball on other [existing] epidemics and pandemics. With primary prevention, they were already off target by the time COVID came along. But the innovations in terms of treatment delivery and peer support groups meant that people with HIV didn't have too many treatment interruptions [during COVID]. We've had some issues around supply chain issues, but by and large, people on treatment continue to do well.

We have seen some antagonistic interactions between COVID and HIV, and particularly in those not on antiretroviral treatment and not virally suppressed, which underscores the importance of not abandoning one incomplete epidemic when a new one comes along.

I think in terms of PEPFAR and the Global Fund, we've been able to reach people who utilize health services. So we've made good progress in most countries in terms of the early targets. With COVID, we saw the most impact early on during the during lockdowns—for a whole range of reasons. People were scared to go to health facilities in case they would get COVID, and so on. So new HIV testing and new HIV treatment initiation took a bit of a knock, at least in year one, and that's slowly starting to pick up.

Think Global Health: So, big picture?
Quarraisha Abdool Karim: Big picture, we've made good progress in most PEPFAR countries. But I think as we get to the last mile, what becomes more acutely apparent is who we are leaving behind. These are the individuals who are marginalized or stigmatized or discriminated against for any number of reasons—injection drug users, substance users, sex workers, men who have sex with men. And even though there may be laws protecting some of those people, including in South Africa, the reality on the ground is very different in terms of access.

There is a need for a shift to more patient-facing or more community-centered, human-centric approaches; and that we reach these individuals who are being left behind. Because

while they may be a smaller proportion of the population, they represent a disproportionate burden of new infections. And the continued high rates of new infections in that group, and the inability to access ART treatment easily means that we have ongoing transmission, ongoing death rates, and ongoing complications from not being put onto treatment, not having access to treatment, and not having access to prevention measures, particularly PrEP. Altogether, this is the Achilles heel.

What got us to the first ninety miles is no not going to get us through the last ten. We have to rethink some of the approaches and some of the successes that we've had to get to here and ask, what do we need to be doing differently? We have got to deal with the hard issues, the difficult issues, the challenging issues of stigma, and discrimination, and marginalization, and the populations that we're not reaching through our mainstream responses and activities.

Think Global Health: And do you think that that can be addressed in the next five to ten years?

Quarraisha Abdool Karim: I have a lot of optimism in both PEPFAR and the Global Fund. They've taken on tough battles and have succeeded. I think, with Ambassador Dr. John Nkengasong [PEPFAR's U.S. Global AIDS Coordinator and Special Representative for Health Diplomacy, appointed in June 2022] in charge—who's lived in Africa and was at the CDC—and with his more recent work at the Africa CDC, it gives him good insights into what's needed to get us back on track and achieve the 2030 goal to end the AIDS epidemic.

This has not just been an investment in HIV. They've been investing in people on the most impacted continent, but also in terms of universal health care delivery, and in terms of building one house—lab infrastructure, surveillance, and strengthening of health information systems. I think all of those things have multiple ripple effects. COVID was the litmus test of how important these advancements have been beyond the HIV and TB epidemics. Despite areas of challenge, one would anticipate with conservative policy, it is truly amazing. When people work together with unity of purpose, look what can be accomplished.