

A Conversation with Firoz Rasul, President of Aga Khan University [Transcript]

Well, as you've just seen, the Aga Khan University is playing a central role in the AKDN's COVID response in innovating new approaches, in providing health services, and educating across all their campuses. Today, joining us to talk a bit more about that is the president of the Aga Khan University, Firoz Rasul. Thanks very much for joining us today to talk a bit about Aga Khan University in the midst of this unusual global situation.

Thank you, Khalil, and thanks for the opportunity. This pandemic took all of us by surprise. And it was not something that many people who are alive today have ever seen a pandemic before. And to be able to react, to respond, in ways that would help the constituencies that we serve was something that we had to do very quickly.

So, as a university that runs hospitals, teaching hospitals, but also acute care hospitals, we're sort of in the middle of the action if you like. There are several things we're learning, or have learned, and one is that this disease, this virus, is unprecedented and therefore nobody has ever seen this before. So, there's so much that is unknown about it, and it affects different people in different ways, different ages, different parts of the world, and different ethnic groups, different occupations. There is so much that we don't know. And that means there's so much that we are learning as this progresses, and that means that we as a university should be studying, researching, trying to understand what this virus is, how we can treat it. But more importantly, also what treatments, therapies, vaccines, need to be developed to protect the people today, but also in the future, because as we have seen this particular virus, this pandemic is coming in waves. It's not like you will finish one and then you're done. There are subsequent waves. So, what does that mean? Some people are saying the virus is mutating, so it's changing and what does this change state mean?

It's a time of great excitement in some ways, scientifically, while it's also a time of great terror, as people are concerned about their well-being, their family, their jobs, their economic livelihood, complete disruption to their lives. So, it's a very critical time for the Aga Khan University to play its role in helping to understand, but also address the issues that this pandemic raises.

For us, there are a number of strands that I want to pull out and follow a little bit in a sense. It's almost like it's exactly a crisis of this complexity that the university was, in a sense, established to be able to play a role in. Let's start with the healthcare service delivery dimension. When the university was founded in its initial phases as a health sciences institution, the idea of providing international standard health care was really at the core, a core principle of work – quality health care, even in a difficult environment that the university was established and now providing care in a number of other settings. How has the pandemic created challenges for the way in which you're actually providing care, and how is it you're grappling with the requirements for continuing your commitment to quality, despite all the difficulties of the pandemic?

So, as you pointed out, the university was, from its very founding, its very inception, Hazar Imam [His Highness the Aga Khan] wanted it to be at an international standard, which means it had to work with peers across the globe, who were at that high standard. And we had to first achieve the standard and then maintain the standard.

Now we are a private, not-for-profit university that runs hospitals. But we are a small part of a public health system. And we are in the developing world, where the public health system is fragile, is inadequate in many ways, and unable to serve the populations where we are. So, there is a role for us to play, but it's a role that has to be one of leverage, rather than serving everybody, because we cannot treat all the COVID patients that come. But we have to figure out how do we assist, empower, and encourage, in many ways, the public system to take on the responsibility that it should.

So, in the first place we had to figure out quickly how to treat these patients, and our relationships with international universities helped us understand because the wave, the disease of COVID-19 came to Pakistan and Kenya and parts of the world where we are, after North America and Europe, and of course, after China. So, we had some time to learn about what was going on, even though it wasn't a lot of time, it was weeks, maybe three or four. And that allowed us to quickly reach out to our networks to understand what was going on. And then to be able to mobilize the resources that we needed.

Secondly, knowing we can't treat everybody, we needed to understand how we can work with the government, in first making public policy about movement of people, about shutting down schools, about public transportation and so on. On the one hand, and on the other hand, providing advice and support on how to treat patients. And in particular, the biggest dearth in the developing world is in critical care beds, is our Intensive Care Unit (ICU) beds. And as you've heard, COVID patients can deteriorate extremely quickly, particularly if they have what are called comorbidities or other ailments that accelerate this deterioration. And so, the ability to, or the capacity to, have ICU beds, equipment, nurses, doctors, is critical for any country, and in Pakistan for example or Kenya, they don't have – the public system – doesn't have enough.

So, what we did is we created tele-ICU systems. So, any doctor in any part of Pakistan can be connected to us. And this was done through the support of the Gates Foundation, who was very excited with this initiative that we had come up with. And they were prepared to fund it, so we created this tele-ICU link that across Pakistan was able to respond to a doctor in a remote area with a patient that was critical. And they didn't know what to do because they were not an intensivist, who's trained to do this. So, our intensivist help, and as those numbers got bigger of patients that needed help, we actually went through our alumni in the US, who also agreed, whatever time of day or night, to be connected to a doctor, to provide this assistance.

That was the vision, that Hazar Imam [His Highness the Aga Khan] had, which was that AKU should be able not just to deliver, but also to empower and facilitate expansion of this type of quality that we were expected to provide. And as our partners, so what we were doing, they were very excited and they, many of them, offered to help. So, we were able to take AKU's core facilities or core capabilities and expand it meet this vision, to be able to serve the countries where we were.

What an incredible set of initiatives. Let me turn to another strand in your initial comments, which is around research. I mean another principle of the founding of the Aga Khan University was that we really should be at the frontier of knowledge and we should be a research-intensive university, especially looking at the issues and challenges of the developing world because there wasn't a lot of dedicated knowledge capacity looking at those issues. Now, it seems to me, for all the reasons you've already mentioned, that COVID has presented, all kinds of very important, and quite interesting scientific questions. How is AKU responded with its research capacity and looking at some of the

frontier questions that COVID is presenting and once it's linked back to the actual quality of care and the quality of life of the communities that the university serves?

So, this is one of the most exciting parts of what we're doing with and about COVID. As you pointed out, Hazar Imam [His Highness the Aga Khan] set up AKU be a research-led university, research-driven. And because research means you're creating, advancing new knowledge, one of the things that we realized very quickly is that the COVID crisis is a level playing field. There is no part of the world that knows more about this than another part of the world. So, there's an equal opportunity if you like, no matter where you are in the world, to be able to uncover or discover something about the disease as much as anywhere else. And so, very quickly, we started to look at a number of factors that were mysterious. One is, why did Pakistan and Kenya, the countries that we are, in relatively few deaths from COVID, compared to countries in Europe, in the US, in Canada and so on? That is still not clear and we are at the middle of this, trying to understand what is it about our populations, about our environment, about our diet, about whatever style of way of living that is contributing to this. Is this short term, does this have a particular benefit that we could, we could unlock and understand how this might help others? So, that's a particularly interesting question or set of questions that we are dealing with.

Also, because we are in the low-resource setting in the developing world, we've had to make do with innovations, or we have had to come up with innovations, to be able to extend our PPEs, the protective personal equipment, we have found a way to disinfect masks, so we can reuse it. We have found a way to develop our own nasal swabs, because you couldn't import, nobody wanted to part with them, every country wanted to keep all the supplies they had, so we had to print our own. So, we developed 3D printing, and so we develop those swabs. We had to come up with ways of being able to use a ventilator on more than one patient, because we didn't have enough. So, we had to be able to come up with those types of questions. We have apps that we've created for the population so they can monitor their own health, and they know where they can get advice and there's information available to them. And we want to develop apps for our employees and students, so before they come to work or they come to the University, they do a self-check. We know what their status, and then we direct them accordingly. Either they can stay at home, or they go for a test, or they can come to class, or to work. So, these were some of the initial areas.

But what is now the new phase that we're getting into is that we have been selected, because of the quality of our facilities and our people, to be clinical trial sites for vaccines. And there are two vaccines that we are testing right now, one is a vaccine called CanSino, which is from China, which has been tested in Karachi, and in what they call phase three trials, which is the final stage before approvals. And in Kenya, we are testing or trialing a vaccine from Sanofi. And both of these entities have selected us because they know that the quality of data, the quality of testing that we will do will contribute to their global understanding of how this vaccine works in different communities, in different parts of the world, in different age groups, in different ethnicities and all of this information will be then combined for their application to go to commercial production and for use with the public. So, we are playing very critical roles in the countries where we are, for the populations that we serve, to be able to test these vaccines so that they can be ready for use immediately, that they get approved. There are other research areas that we are involved in that relate to new therapeutics, new drugs that are coming out in testing them. We've done a couple of the Remdesivir, which is a drug that is being used widely, has been tested by us, a validate it for our populations. So, these are some of the very exciting, new areas, that we are working on, and creating a new understanding that we're sharing with others.

Firoz, if that wasn't a sufficiently staggering agenda for the university, you're also of course, providing education to cohorts of students in the health sciences and other areas. Obviously, COVID has challenged educational providers around the world, educational institutions have been shut down, they've had to pivot in different kinds of ways. Talk to us a little bit about how AKU is adapting itself to the challenge of providing education, also at high quality, in pretty sophisticated areas to its students despite all the challenges that COVID is now, presenting us.

Well, education institutions have been affected in a big way. And in particular, we have to follow local regulations. So, governments dictate or decide whether schools are open or closed, or whether universities will allow in-person teaching or not. So, where we have non-health sciences students, we're basically doing only online learning and teaching. We have developed this, we have a really great group of our teaching and learning network, that trains our faculty in not only how you deliver online courses, but how do you design these courses, how do you design teaching materials. How do you assess whether the students are really following, and are actually able to deal with the material in this way because this is not something they're accustomed to? What about students who don't have the internet, what about students who don't have electricity? Because in our parts of the world, these are things that happen, because these are not stable services that are available. So that's one set of students.

But then we have students who need clinical hands-on training and need to be able to learn how to treat a patient and how to do an operation, how to fix a broken leg, how to deliver a baby. You can't do this online, and this has to be done in a hospital or in a proper setting. And this is where we have been working with the regulators, but also our own students and parents who are also worried. So, we have created cocoons, if you like. Bubbles, where our students come in, they stay on campus, their housing is on campus, their classes are on campus, and their movement is very carefully monitored and controlled, and the students understand the constraints under which we are trying to do this. And they've been extremely cooperative and extremely willing to be able to put up with some of these inconveniences. We've had to cordon off parts of our campus, not to allow the public, because in Karachi, for example, our nursing school and medical college is smack in the middle of a hospital campus. So, we've had to cordon off a number of spaces to restrict movement of people, and we've also had to work with our students, there's been a restriction on their social interaction because, as I think is everybody understands, not only do they have to wear masks and continually wash their hands or sanitize their hands, but also their ability to work in close quarters is restricted. So, we have had to adjust.

Until now, we haven't had any outbreaks, or had to close classes, we test our students every week. We have a hospital, we have a testing service, very reliable. We do a lot of tests with the public, so we can certainly test all of our students and the faculty that teaches them. And we continue to monitor this. But as the cases are increasing, as the positivity rate, as they say the number of people testing positive in the population that we are testing, as that starts to increase, you know, we're going to have to continue to review, and perhaps to adjust, how we are working with students on campus. But so far, I think when people even from other institutions come and see what we're doing, they're impressed, they want to learn from us, even from outside Pakistan or Kenya, and about how we're going about this. And so far, we've been able to keep it going. And the parents and the students are happy.

Firoz, one other principle, it seems to me, from the founding of the institution, was [the] commitment to gender equality and this idea that the nursing school, which was one of the initial faculties and

programs initiated by the university, was going to make a big contribution to the status of women in Pakistan and in other parts of the world where the university would operate. Many people are calling or talking about the hidden gender crisis of COVID, the way in which so many of the negative consequences of the COVID pandemic have fallen on the shoulders of women. Can you talk a little bit about how the university is thinking about its gender equality mandate through throughout this crisis? I mean it's been remarkable to watch, even some of the senior people who are architecting their response now are women in significant positions of leadership in the institution. What are your reflections on that other founding principle of the university as you think about it, playing out during the crisis?

From, as you said, from the founding, this has been a critical part of the mission, to help develop, empower, equip, and encourage careers for women. And our nursing school, 80% of our students are women. In our medical school, 50% of our students are women. In our Institute for Educational Development, more than 50% of our students are women. More than 50% of our faculty are women. So, that is been, since the founding of the University, a particular focus on helping women to enable them to get into university to prepare for careers that they want to take, and also to try and be flexible in our operating regulations or the way we operate.

So, for instance, we have many nurses in our hospitals, mostly women, but they're also mothers. They have families. So how do we organize ourselves to be able to give them the time to spend with their children, with their families, and yet, be able to study because they may be doing some continuing education, and of course work as a nurse to provide the care that we would like them to do in an international standard hospital? This is not easy. And so, having first the sensitivity and the appreciation or understanding of the life that a professional woman leads is something that we've continued to inculcate. I'm not going to tell you we've got it perfect, because I don't think we do, we are constantly learning and improving, but a particular area that you also mentioned, that we have now started to focus on, is the development of leadership in women or women leaders, and we have started to focus on how do we create the opportunities and create the conditions that enable, allow high potential women to rise and to take on bigger and more challenging roles in the university, through the hierarchy. And as you pointed out, we have many of our chairs are women, many of our deans are women, our CEO of the hospital is a woman. So that is something that we are beginning to try and encourage and facilitate, but it isn't easy because we are not unique. We still have men who have, especially the people who've been around the organization for many years, who are, if not resistant, certainly not accepting in many ways of this. And then you have the younger generation, which is very supportive and encouraging, so I think over time you will see many more women rise to the senior management position in the organization and lead AKU. Right now, they're in research, they're involved in patient care, they're involved in teaching, some of our academic leaders have risen up are women. And so, I think that, I hope that, when people look back and look at AKU, they will conclude that we are meeting that aspect of our mission.

Firoz, maybe we just step back as we conclude this fascinating conversation. You know, in a way, as I'm hearing you speak, it seems like COVID is exactly the kind of multi-dimensional crisis for which the university was established to be able to respond. I mean yet again, I feel like we're experiencing, as the university contends with the response to COVID, the prescient of establishing in the developing world, a world class knowledge institution. Now it's taken decades of support from, obviously from the Chancellor, from many leaders, and from many donors and supporters from around the world,

including many of those we might be speaking with tonight. But can you just step back and reflect a little bit? I mean, it does seem like this is exactly the kind of challenge that requires all the capabilities that a high class, a world class standard knowledge institution like the university would be designed to address.

Among the founding principles that were set out by the Chancellor, was that AKU should be able to serve populations in which it is based in enduring ways. So, it's not a short-term, it's a long-term commitment to serving, helping communities within which we exist. And that role can only be meaningful if the impact we are making is one that solves problems that these communities have or are dealing with. And in order to solve these problems, if we can bring to bear, both local knowledge and best practice that we have heard many times being mentioned, then we are doing a great service to these populations. But to be able to build these types of capabilities, to bring international best practice, we have to be able to bring on board, people, technology, facilities, and so on, that are equal to anywhere else in the world. Otherwise, how do we attract the best people, how do we keep the best people who are born in these countries, unless we can provide them a working environment where they have peers that they're excited about that they can learn with, learn from? That there's facilities that they are excited about coming to work every day, and that there is equipment available to them that allows them to do their research for example?

None of this would have been possible without the commitment of our donors. Our Chancellor and founder established the university, but what is keeping us now at the forefront of these areas that I described is the generosity and support and commitment of our donors, and I hope that they've already seen the areas that we are into. I mean, everything that they hear about, no matter where they are in the world, big data or data analytics, artificial intelligence, stem cell research, neurosciences, the microbiome – all of these are areas where we are at the forefront of all of these, just as we are, with other as just as other institutions.

And there are people who would like to work with us because we have knowledge now that we are creating. And I'll give one example: a problem in our part of the world that is currently very acute is stunting in children. These are children that at age five are stunted. In Pakistan the statistics are horrendous, almost half the students are stunted, half the children by age five are stunted because of malnourishment, because of the lack of early childhood care and development and proper drinking water. And maybe they're a child of somebody who was stunted before, in the previous generation, their mother or their father. So how do we deal with this situation because if a child is stunted, they are disabled from learning, from growing, from really realizing their full potential in life. And this is an area where AKU is spending a lot of time in understanding, not just the reasons of public health in what causes this, but what about the biology of the child, of the body, that may be contributing to this condition. And in this regard, we are working with Harvard University and University of Virginia, who are interested in studying our populations because they don't see some of this in other parts of the world, although stunting is a scourge of the developing world. But it is something that we have a particular expertise in, that we have developed in working with mothers and children. And this is now enabling us to break, you know, work on the frontiers of science, that helps us create knowledge, not just for our populations, but also for other populations in other parts of the world.

Firoz, it's been an extraordinary experience hearing everything that the university is doing during these difficult times, not only to respond to the crisis but to think again well past the crisis into the

future, looking at issues at the frontier and building the next generation of leaders in health sciences and elsewhere. So, Firoz, please know that you have lots of supporters, please convey our best wishes to the entire team at AKU during these difficult times, and you have our gratitude and our admiration for the extraordinary work that's being done on this issue and on so many others. Thank you for joining us today.

Thank you for inviting me.