### Sandro Galea:

Welcome to our latest public health conversation starter. My name is Sandro Galea. I have the privilege of serving as Dean of School of Public Health at Boston University. These starters are a series of discussions we have with thinkers who provide a critical perspective on the work of public health.

Today I have the great privilege of speaking with Budi Gunadi Sadikin, Indonesia's Health Minister, a role he was appointed to in 2020. As health minister, he led the country's COVID-19 vaccination program and has worked to support and strengthen health systems in Indonesia. Prior to his service as health minister, he led Indonesia's National Economic Recovery and Transformation Task Force. And during the G20 presidency of Indonesia in 2022, he helped create The Pandemic Fund, which provides multi-year grants to help low and middle income countries prepare for future pandemics. I'm really delighted to be speaking with him today. Mr. Minister, welcome.

Budi Gunadi Sadikin:

Thank you, Sandro.

Sandro Galea: So you took over as health minister in 2020.

Budi Gunadi Sadikin:

Yes, Sandro. I did.

#### Sandro Galea:

An inauspicious year to take over as Minister of Health of any country anywhere. Can you tell us a little bit about COVID in Indonesia and how the country responded and how you felt you did during and emerging from the crisis?

#### Budi Gunadi Sadikin:

I was asked that by the president to replace the previous Minister of Health. So I only have three years and nine months and he only asked me to do two things. One is to take care of the pandemic, do the vaccinations, and number two, to do the biggest ever reform in Indonesian healthcare system.

#### Sandro Galea:

That's a small portfolio. So tell us how those two went.

### Budi Gunadi Sadikin:

So one year and six months concentrate on COVID-19, do the vaccinations, access vaccine and we can deliver 2 million jabs a day. So we finished, 204 million Indonesian people got the vaccination in one year, six months, and after that just concentrate on the reform.

### Sandro Galea:

So let's start with the COVID part. So what were your biggest challenges in actually in getting the vaccination to where you wanted it to go?

### Budi Gunadi Sadikin:

Nobody trust Indonesian can pay. So I approach all the companies and they are quite capitalistic. So I went to China, I got a vaccine first, but after that, then AstraZeneca approached me because they understand, "Oh, Indonesia is willing to pay," and then we get from AstraZeneca. When we get from AstraZeneca and the other vaccine company approaching us. But after that I moved to Gavi. I realized there is an organization called Gavi. So I approached Gavi. So we get around 1 billion equivalent of vaccine.

#### Sandro Galea:

Now, you said with the trust, was the trust a problem with the vaccine or was it a problem with the system of vaccinating?

#### Budi Gunadi Sadikin:

The provider of the vaccine, they prioritize based on the country that can pay. So that is what happening. So country like Singapore, in my region, got the access to a vaccination first.

Sandro Galea:

Right, right.

# Budi Gunadi Sadikin:

So that is something that trigger me. I think this is scientifically wrong and ethically wrong. If you give the vaccine only to a group of country that can pay because you cannot stop the virus to spread across the world.

Sandro Galea:

But tell me a little bit, we'll get to that in a second, but tell me about how the population of Indonesia and their trust in the vaccination campaign. How was that?

Budi Gunadi Sadikin: Not as bad as developed country.

Sandro Galea: Okay, interesting. Why is that?

Budi Gunadi Sadikin:

I think they are not as exposed as other developed countries' populations about the negative side of the vaccine. But some of them believe that by the region, that actually they can ask about to cure the sickness instead of using vaccine. So that is the most difficult part.

Sandro Galea:

What percent of population did you get to vaccination?

Budi Gunadi Sadikin:

204 million out of 280. But the children we don't vaccinate.

Sandro Galea: Right, for adults. For adults you must have been 90/95?

Budi Gunadi Sadikin: 90 to 93%.

Sandro Galea:

Interesting.

Budi Gunadi Sadikin:

And 17,000 island.

Sandro Galea:

And 17?

Budi Gunadi Sadikin: Thousand islands.

Sandro Galea:

17,000 islands.

Budi Gunadi Sadikin: That makes it more difficult.

Sandro Galea: That makes it challenging. Yeah.

Budi Gunadi Sadikin:

Yes, yes.

# Sandro Galea:

Let's talk a little bit about this whole issue of vaccines being available to all countries equitably. Tell me about The Pandemic Fund and how that would work and how it would go towards solving some of this.

# Budi Gunadi Sadikin:

When we have this problem, I realized that there are two things. First, the poor country, they don't have money. When they don't have money, they can't access good vaccine. So that's why we have to create a fund to help them. And at that time, to realize the fund takes 6 months to 12 months to actually realizing it, it's too late already. But second, again, the fund is available, it's following the regular path. I work as a banker for 30 years. So I know all the large development funding agency they used to work in the peacetime. So the approval, the risk management, it will take months. But this event you need to work in wartime. So you need the funding to be dispersed in weeks instead of months. So that is something that we need to change.

Like in finance sector, World Bank will disburse the loan in months, IMF can disburse the loan in week. In healthcare sector, we don't have that mechanism. Everything is by month. So we need to work in global health architecture, work like in global finance architecture. You have financial crisis, they can jump in a week. So here in healthcare sector we don't have the capacity. That's why we developed Pandemic Fund.

### Sandro Galea:

And how do you feel about The Pandemic Fund? What's your level of confidence that it's going to work the way you want it to work?

### Budi Gunadi Sadikin:

It started, it's pretty good. And during the Indonesian presidency we established first time the joint task force between Minister of Health and Minister of Finance, very, very important. Minister of Health is the only ministry that have the formal relationship with Minister of Finance at the global level. Every other ministry don't have the means, energy, trade, [inaudible 00:06:06], so they're envious. That is a good thing.

Now what we need to improve is still The Pandemic Fund is very focused on the peacetime process. We need to be able and be ready for the wartime capabilities. So when the pandemic hits next week, I don't think we are as good as what we aspired.

# Sandro Galea:

As you aspire. One more question about the pandemic then I want to move to health systems. 17,000 islands, so tell me a little bit about the logistics of getting vaccination at the same time to so many people in so many islands.

# Budi Gunadi Sadikin:

My first three months is catastrophic because Indonesia, the last 20 years they changed like the US, we federalized the country. So that is very difficult when distribute to the governor, [inaudible 00:06:54] has political associations. So he will not distribute the vaccine to this mayors that is not aligned with his political aspirations. So after three months, I get back to president and said, "I will not be able to do it unless you help me." How? To mobilize the national police and the national army. Because why? Because it's centralized command and control.

So then in Indonesia, the army and the police, they have offices down until the village level, 85,000 buildings. We put the Indonesian Army and police there. So that is one of the reason why it works. When we started doing it, I'm not popular globally with, "Wow, why use this? Why don't you use..." In the healthcare system. Because our healthcare system will not support us to execute at the speed as efficient as the army and police.

# Sandro Galea:

Do you use the army and the police affect trust?

Budi Gunadi Sadikin: Not at all regions, but Indonesia, especially the army. They trust the army.

Sandro Galea: They trust the army-

Budi Gunadi Sadikin: More than the police.

# Sandro Galea:

[inaudible 00:08:03]. Let me switch. Let me switch to health systems. So let's talk about the second part of your remit. So tell us how that worked, what you started with and what you have tried to do in the health system reform you've brought about in Indonesia.

# Budi Gunadi Sadikin:

What I realized when I joined this ministry and asked by the president to reform, because I'm not a medical doctor, I realized that the name of the ministry is Ministry of Health. So our job is not about curing sick people. Our job is to cure people's health. So that is something that I share. I mentioned to all of them because all of my predecessors, medical doctors, so they train 10 years, 20 years to cure sick people, not to keep people healthy. And I talk to other ministers, all of them, the name is Ministry of Health, not Ministry of Sickness or Ministry of Curing Sickness.

So that's why that is what I'm pushing, the reform in the Indonesian primary care. Indonesian primary care started in 1968, so 10 years before [inaudible 00:08:59]. The president at the time established 10,000 primary healthcare clinics owned by the government at 10,000 districts. So we have 38 provinces, 514 cities, 10,000 districts, 85,000 villages and 300,000 hamlet. So the president at that time built this. No, I revitalize this system. So I moved on to 300,000 hamlet to touch, to do promotive and preventive action to our people.

My focus is there. One, revitalizing. Second, we changed the focus. Before only focus for pregnant mothers and babies because our populations mostly on that one. But now we moved to all life cycles, adult and elderly. Number three, we do massive digitalization, including inviting Elon Musk because 17,000 islands we don't have connectivity, right? We change the applications, we don't have the connectivity. So

Tony Blair introduced me to Elon, I invited Elon to come to Bali and provide [inaudible 00:09:57] connections.

### Sandro Galea:

So tell us more about the digital transformation. So what actually are you doing with that?

# Budi Gunadi Sadikin:

Example, we do vaccinations and we are record in the book. Because of COVID, we can put it digitally with QR code and send WhatsApp message. So we work with WhatsApp, [inaudible 00:10:13] helping during the pandemic because the Indonesian love WhatsApp, they don't... They use email, they use WhatsApp. So every time you get vaccinations, all these 25 million children, then we will send the mother the certifications, digital certifications and say, "Hey, next month you have to come get." So that's one invention.

The other one that we do is not only immunization but also screening. We do, example, infectious disease screening like malaria, tuberculosis, HIV. We do the screening, put into our system and send WhatsApp messages to the individuals, to the family, and to the healthcare workers around the community so they can take care of the person. The same as non-infectious diseases, we have a blood tension problem and sugar, diabetes problem, increasing very, very. So we do the screening when their HbA1c is above 5.7. We will send a WhatsApp to the family.

You'll see a man have this problem because we love sugar, we eat a lot of sugar. We send it to the wife. The wife is the only person in the household that is being afraid by anyone. So even the husband will very afraid. Indonesian husband very afraid of their wife. So they will follow, reduce the food intake for the husband and then send it to community workers so they can come and give whatever [inaudible 00:11:36] or whatever free medicine.

# Sandro Galea:

So people are getting this through WhatsApp? So you are using WhatsApp is the platform to actually get-

# Budi Gunadi Sadikin:

Yeah. Screening goes to the centralized databases and then we can monitor which region, which village also have a high prevalence in...

### Sandro Galea:

[inaudible 00:11:52]. What percentage of the population actually are you reaching?

### Budi Gunadi Sadikin:

We are very lucky during COVID, we use these apps as PCR test result and then you do it, then we will give you a sign. The red, green or yellow. If you are red, it's positive, you cannot go to public locations or public places or public transportation. We use it, downloaded 120 million by Indonesian people. So then after COVID, we use this as a citizen health app because we already having it. So all data will be coming in there. And part of the reform that I did, I changed the law. So that is 11 updated healthcare law from [inaudible 00:12:34] into one and put a massive digitalization.

And one of them is an opt-out clause. It's different with a developed country. So the default data is in, even to get out, you sign the paper, you get out, but the default is in. So the government have the data.

### Sandro Galea:

Let me switch to primary care reform as part of the health system transformation. Tell us about that. So tell us what you actually did with that and how successful you think it was or what actually remains to be done.

#### Budi Gunadi Sadikin:

It just started, but primary care, in my view, what very important is to advocate the people. So promotions. What we did, we have 300,000 hundred hamlet and each of them have five community workers, so 1.5 million carer. Before they only do pregnant mothers and baby. So we retrained them so they can go to every household and advocate the people, either pregnant mothers, baby, children, adults-

# Sandro Galea:

So you're expanding the scope. So you're expanding the scope.

# Budi Gunadi Sadikin:

Expanding the scope. And number two, we realize also why in Japan they have one of the highest life expectancy because they educate their children. So we develop a curriculum for four to five years old, five to six, six to seven, seven to eight, eight to nine and put it digitally, YouTube, everything, work with the Minister of Education. So we educate them about health early. So that is the promotive activities.

One thing that I haven't done, which is my dream, again in Indonesia, the mothers are very passionate to take care of the health of the family. We have 120 million mothers. So if we can teach Indonesian mothers. Now they can only do things. If you have fever, they know how to use a temperature to the children or husband and give a prescription. You have cough or you have diarrhea. Now I want to teach 120 million Indonesian mothers how to do hypertension, blood sugar, and also cholesterol and tell their husband to behave well, stop smoking, and then send them to the primary health care clinics because we provide free amlodipine, free metformin or free [inaudible 00:14:41].

So that is, I haven't done yet, but I work with somebody. There is an NGO in US, I want to train Indonesian mothers.

Sandro Galea:

That's the aspiration.

Budi Gunadi Sadikin:

The free healthcare providers.

Sandro Galea:

You speak like a health thinker. You talk about prevention, you understand the difference-

Budi Gunadi Sadikin:

I'm a nuclear physicist by the way.

Sandro Galea:

But you're a nuclear physicist and before this had a career in banking.

Budi Gunadi Sadikin:

Banking.

Sandro Galea:

So tell us about your personal path. Tell us how somebody with nuclear physics background and banking comes to be a minister of health who understands health so well.

### Budi Gunadi Sadikin:

So I got the challenge by all these doctors when I became Minister of Health. You don't understand, you don't have the background. My argument to them, "Hey you have to remember the first Nobel Prize winner, medicine and physics. In 1931, the first Nobel Prize winner in physics is William Ramsay." And his invention is being used up until now, millions of doctors at hospital. And the third Nobel Prize winner in physics is Pierre and Marie Curie, which the technology is used in radiotherapy by all hospitals and all doctors. So if you believe that physicists don't have any contributions to medicine, I think you're totally wrong. That is my argument.

# Sandro Galea:

That's a fair argument. But tell us about your own journey. Tell us what your path was.

### Budi Gunadi Sadikin:

I know working as the CEO of the largest [inaudible 00:16:08] country [inaudible 00:16:09] is like this. Working in the minister in the country [inaudible 00:16:13] like this. So the people asking me, "Why you do it? It's because the best wealth is health. I've been giving billions to my client, raising money. [inaudible 00:16:27] not really US in 30 years. But I feel so much contributions to the wealth of my clients. But so little contribution to humanity.

Here, I help my friends, Peter Sands used to be the CEO of Standard Chartered global, now is CEO Global Fund, only raised 16 billion, which is for us bankers, is very, very small for 30 years. But it saved 50 million lives, HIV, tuberculosis. So you raise actually a very small amount of money, but you feel so much contribution to humanity. That makes me love to work in healthcare.

# Sandro Galea:

Let me switch to hospitals for a second and actually clinical care in Indonesia. So tell us a little bit about the system of clinical care in Indonesia. How primary care links to secondary care, links to tertiary care, and the balance between prevention, primary care, and tertiary care sickness care.

#### Budi Gunadi Sadikin:

Before, again, because all of the previous health ministers is doctor, which is trained 10 years, 20 years to cure sick people but not to keep people healthy. The budget, the time is spent by the health ministry more to the secondary care. But now I changed

that to 50/50. But I can share also with you also our coverage financially, the national health insurance, we only have one. 220 million members, which is very, very good already to solve the demand side. The problem is with the supply side. We have 3,200 hospitals.

But I give you example, the number one killer is heart attack. Number two is stroke. If you get heart attack and stroke, somebody told me, "Budi, you need to have a device called the Cath Labs because in less than four and a half hours you need to bring these patients to the hospital and do insert a ring or a thrombectomy and coiling if you have a stroke." Out of 514 cities, we only have 44. Out of 34 state or region provinces, we only have 28. So we still don't have this facility. People are dying.

I'll give you another example. Number one killer in women is breast cancer. Breast cancer, what I learned, if you identify early, detect early actually with current technology, 90, 90% probability to survive. But you detect late, then 90% fatality. So what we did, you need to do mammogram, mammography to detect. Out of 3,200 hospital, I only have 200 hospitals have mammograms. So can't you imagine the access to this facility is ridiculous. So that's why I come to World Bank and just approved last December of \$4 billion loan, World Bank, AIB, ADB, Asian Development Bank, and SDB to revamp our primary care and also hospitals.

We buy cath lab for 514 cities, mammogram, 440 cities, chemotherapy facilities, 414 cities, CT scan, 514 cities, Linux, radiotherapy in three or four provinces. But then I hit another problem, is the availability of a doctor.

#### Sandro Galea:

Interesting. How bad is that problem? How many doctors are you missing?

#### Budi Gunadi Sadikin:

[inaudible 00:19:52]. I Google, this is all the doctor association attack me in the country because I said, "We don't have enough doctor." "Budi, you don't understand. We have enough doctor. The problem is distribution." Hey, when I Google, the average lower income country is one for every 1000. 280 million, I need 280 million doctors and only have 140. So 0.5. And when I see the rank globally, same as Yemen and Tonga, even East Timor, Philippines is above us. So I need to produce more.

And at that time when I came, there is a moratorium in the faculty of medicine establishment. We only produce 12,000 per year. We have 140,000. We need 280,000 to reach a lower middle income country average. Global average [inaudible 00:20:38] 1.76. So I need another 200, \$300,000 with the average graduate, only 12,000, and

they said, "That's enough." So I said, "I don't understand." And somebody told me, "Oh, they love to control the supplies." [inaudible 00:20:52]. So that's why I am pushing the reform and opening more faculty of medicine to specialty education. At least I have successfully done it in the specialist education. Before, special education in Indonesia, in all the country in the world, it's run by the university specialist. Here, it's run by the faculty.

# Sandro Galea:

I want to ask you some global questions, but before I do that, one more question about your term as Minister of Health. What has been the hardest challenge you've actually dealt with?

Budi Gunadi Sadikin:

The medical professionals.

### Sandro Galea:

With the medical professionals. Based on this issue. Based on this issue of supply and...

#### Budi Gunadi Sadikin:

Based on the issue of supply. And they are very close. I give you an example, we don't have enough doctors. Most of our rich patient and some of the middle class goes to Malaysia, Singapore, and Thailand because of quality. But every time I want to bring a foreign doctors, for example, from Mayo Clinic, Harvard Medical School come, they are not allowed by the association. But that is one of my [inaudible 00:22:00].

#### Sandro Galea:

It's interesting that as a Minister of Health of such a large country in this moment in time, you note your biggest challenge is with the medical profession. That's an interesting observation. Let's talk globally for a second. Let's talk about from your perch. What do you see as the biggest challenge that middle, low-income countries face right now, globally around health?

#### Budi Gunadi Sadikin:

They have two side. Some of the lower middle income countries have a problem on the demand side. So they don't have enough financing to make sure that people have access. But some of the middle income country, especially upper middle income countries a problem on supply side. So they cannot supply the quality healthcare

services with a good price. So lower middle income country, in my view, have a demand side capability problem. They don't have enough power to let these people access because they don't have enough funding. But on the middle income country, upper middle income countries like Indonesia, we have problem on the supply side.

We don't have enough facilities and enough healthcare professionals to serve standard quality and a good price. But price is everywhere. When I see the health cost per capita increase in every country except India in the last 20 years, is more than GDP per capita increase. It's unsustainable. The price to delivering a healthcare cost, extremely high and it doesn't relate. I give you an example. United States, 79-years-old average, you spend 11,000 per capita health costs. You go to Cuba and Panama, the same 79, you only spend 1,900.

### Sandro Galea:

What do you spend? What do you spend?

#### Budi Gunadi Sadikin:

140. 140 US for 72. Malaysia, 76, 430. 300 US more. So I talk to the Ministry of Finance. If the next five years we go to Malaysia, our average life, I'm 60 this year, I hope I can live 76 and then 300 US multiplied by 280 million, 84 billion US. If you go to Singapore, the most efficient country, 84 years average, 3,300, 3000 US more than Indonesia, we go to that level. We spend 3000 multiplied by 280 million, 840 billion US. Very expensive.

#### Sandro Galea:

That's an interesting difference between lower middle income versus higher middle income. That's an interesting distinction. Let me switch for a second. So in G20, when Indonesia was the president of G20, you actually proposed a joint finance and health minister's meeting, which as far as I know is the first time such a meeting happened. Tell us a little bit about that. Tell us a little bit about how that went.

#### Budi Gunadi Sadikin:

Because when the pandemic happened, two things that I realized. I've seen many financial crisis. When financial crisis happen, there is an institution, single institution called the IMF that can jump in weeks to inject money, solve the financial crisis issue and the balance sheet of any country. In healthcare sector, when you have a global crisis, global health crisis, not global financial crisis, it's so fragmented, the organizations, and they're not ready with the money.

WHO only give you advice. Advice, you cannot do anything. We need money to bring in the vaccinations. The difference with finance, money is not there. Indonesia has money. We cannot access the vaccine because it is not available. So we have to provide emergency medical countermeasures like the vaccine, therapeutics, and diagnosis tool, and change them to public goods during pandemic only. If it is controlled like your private goods, people will die. And it scientifically wrong and ethically also wrong, if you can only save one country. Because there's 8 billion people move around the world.

So that is something that I said. In Bretton Woods, California in 1944, [inaudible 00:25:54] World War II, [inaudible 00:25:55] sit together and establish these two great organizations, IMF and World Bank as the main pillar of a global financial architecture. Now that is the time that we sit together again during the pandemic in Bali in 2022 to establish this Pandemic Fund and hopefully we play as global health architecture, global health pillar that protects from this pandemic and the future pandemic. IMF and World Bank protect the future financial crisis after the World War II. That is something that we have to do and we have to roll up our sleeves and do it, not only talking.

### Sandro Galea:

Let me quote something that you said. You said, "Health cannot be approached as a program, but as a movement." Tell us a little what you mean by that and how you think we achieve [inaudible 00:26:44].

# Budi Gunadi Sadikin:

During pandemic, I want to do the vaccination. I hit the wall because the speed is only 10,000, 20,000 a day. I need to reach a million or 2 million a day. Then I realized because the approach of my ministry is it is exclusive. The ministry stand above the people, is exclusive program. It is our program. I said, "No, we cannot do this alone. We have to do this together. We cannot do this exclusively. We have to do it inclusively. And we cannot treat this vaccination as a program. We have to make it as a movement. It's not owned by us, it's owned by people, otherwise they die."

So that's the approach that I have. I used to lend money to almost everyone in the country. So I knock on door of all of them and said, "Hey, I don't have enough capacity to do it. Government, very bureaucratic, very slow. Why don't you help me do vaccinations to your company, to your region, to your cities. I will provide you with vaccines." So that is a successful initiative. The most successful initiative. Then I realized, it's not only for vaccines, but for any healthcare reform. Healthcare is to be

owned by you, not owned by me, the Minister of Health. If you own your own health issues and want to live healthy, then 50% of my job is done.

Sandro Galea:

You speak someone who has been steeped in public health all your life, and I mean it as a compliment.

Budi Gunadi Sadikin: I'm retiring in the next [inaudible 00:28:18].

Sandro Galea:

Let me talk about universities for a second because you're on the board of trustees, right? Of the Bandung Institute of Technology.

Budi Gunadi Sadikin:

I'm the president.

Sandro Galea:

So you really have close links to universities.

Budi Gunadi Sadikin:

Yes.

#### Sandro Galea:

Tell us, how do you see the role of universities in this ecosystem that generates health? There's the ministry and obviously you've been doing very practical work. Universities are in a different world. So how do you see their role?

#### Budi Gunadi Sadikin:

University need to create a path in the future because they sit in the position, they don't have as much pressure as I do in terms of delivering something. So they have some free time and free place in their brain to guide us to the future. So that is something that I want my university to be like that. And again, university is like the doctors. My university never has the president or the CEO and the president, the CEO coming from other university.

So they're very close, what do you call it? They're very [inaudible 00:29:23]. They want the Bandung Institute of technology alumni to become the CEO. I said, "Why don't we hire from Harvard Graduate School to become the CEO? So make it open and then we can improve our ranking." Our ranking is declining. So I feel very sad with the Indonesian university. I want them to be more progressive, to create a path, create the future [inaudible 00:29:47].

# Sandro Galea:

And my last question, my hardest one. What gives you hope in this moment?

### Budi Gunadi Sadikin:

Every time I see Indonesian young people, I see their eyes. They want to live a much better life. So that gave me energy and hope. I think if we can do something for this generation to become a better generation than I do, I think that is the most... What to call it? Fulfilling job that I can see. So I do hope Indonesian people, next generation, will be smarter, richer, and healthier than my generation.

### Sandro Galea:

That's wonderful. Mr. Minister, thank you. Thank you for what you've done for health in Indonesia and around the world, and thank you for talking to us. It's really a pleasure. Thank you everybody for joining us.