

3 Takeaways Podcast Transcript

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Ep. 155: How An Innovative, Global Vaccine Alliance Accomplished What No Other Organization Could

INTRO male voice: Welcome to the 3 Takeaways podcast, which features short memorable conversations with the world's best thinkers, business leaders, writers, politicians, scientists, and other newsmakers. Each episode ends with the three key takeaways that person has learned over their lives and their careers. And now your host and board member of schools at Harvard, Princeton and Columbia, Lynn Thoman.

Lynn Thoman: Hi everyone, it's Lynn Thoman, and welcome to another 3 Takeaways episode. Today, I'm excited to be with Seth Berkley, the CEO of GAVI, the Global Alliance for Vaccines. GAVI is one of the world's most successful global public-private partnerships. It's helped vaccinate about a billion children against deadly diseases. There's no other organization that positively impacts so many people in the poorest countries. I'm excited to find out how they do it. Welcome, Seth, and thanks so much for joining 3 Takeaways today.

Seth Berkley: Thanks for having me.

LT: It is my pleasure. Seth, let's start with the founding of GAVI. When was it founded? And who founded it?

SB: It really is part of a whole set of initiatives that occurred. GAVI itself was founded in the year 2000 at the World Economic Forum, but the original idea of GAVI, was that there were powerful new vaccines that were making a difference, particularly in wealthy countries, but they weren't available in places that arguably could make the most difference, in developing countries. So, the idea was to create a public-private partnership that would do that. But prior to GAVI, there had been a children's vaccine initiative and that had failed because there was distrust between public and private sector, and prior to that, there was a big UN effort to try to get vaccines out. So, this had been going on for a long time. But of course, as you just said, GAVI has been very successful at doing this, and the most important success is not necessarily only the number of children immunized, but the fact that we've been able to reduce vaccine preventable diseases by 70%, which contributes to a more than 50% reduction in under five [year old] mortality rate, which is extraordinary.

LT: That certainly is extraordinary. Who founded GAVI?

SB: It was founded by a collection of groups. So, the founding members were WHO and UNICEF and the World Bank, but also vaccine companies public and private. The Bill & Melinda Gates Foundation, Bill Gates personally was part of the founding, and of course, implementing countries in civil society. We collect finance from donors, and with that finance, we're able to pool demand for vaccines, and when we pool that demand for vaccines, we're able to negotiate with vaccine companies to reduce price and to make sure that there's a good and steady supply. Since GAVI has been around, we've reduced the prices for the 11 vaccines the WHO [World Health Organization] recommends by 98%. So, in the US, the equivalent would be around \$1,300, they're not exactly the

same vaccines, but \$1,300, and we pay \$24 for those vaccines. So, this is meant that countries could not only be supported by donors, but also when countries get wealthy enough and graduate from GAVI, then they can afford to continue to pay for their vaccines going forward.

LT: How does this work for the vaccine manufacturers?

SB: When we started, one of the issues was vaccine manufacturers had a problem. They would have new and powerful vaccines, and people would say, but why are you not making these available? The reason, though, they weren't making it available as current countries didn't necessarily have hard currency, or would reliably purchase it. Along comes GAVI, and we can negotiate with those companies to then have a long-term purchasing agreement, and when we do that, what that does is they increase the volume of vaccines they produce. Of course, with increased volumes, the cost of production goes down. So, it's a win-win for those companies, because they actually then are able to sell in their primary markets at a lower price point of production and therefore have higher profits. And of course, they make a little bit of money on the developing country markets and more on, say, middle-income country markets, and therefore, what we've been able to do is create in essence, a new set of markets for companies. But we don't stop there. We also have worked to bring competition in. So, developing country manufacturers have joined the fray - we've gone from 5 manufacturers to 19 manufacturers, and that has helped to create healthy competition, so we can further decrease prices and increase supply security.

LT: That is phenomenal. How does the funding side work?

SB: Every five years, we put together an investment case, and we go out to the global community to ask for finance. GAVI has been able to raise \$42.5 billion since it began, and of course, vaccines are the best buy in global health. For every dollar you invest in a vaccine, you get a benefit of about \$54. So, this has meant that people have thought this is something worthy of doing, and of course, our ability to increase coverage and reach the unreachable has been such that people have been happy to support that going forward. We try to work with people who can help us with demand or help us with record-keeping or help us with communications tools. And by bringing innovation from industry, and they often bring tools, but also sometimes they bring their own finance as well, we're able to help leap-frog some of the work in countries.

LT: Can we talk a little bit more about how GAVI actually delivers the vaccines? How do you actually get those vaccines into the arms of children and other people in the poorest countries in the world?

SB: People say, how many vaccines do you give? And the answer is occasionally as a physician, I will be on a press trip and I will inject a child for the cameras, with of course the permission of the parents and the health authorities, but the truth is, and the most important part of this is that the delivery is done by the countries. About 2/3 of our support goes towards vaccines, the other 1/3 goes towards strengthening health systems and particularly immunization systems. And this is critical because what we want to do is leave no one behind with vaccines. So, what we work on is trying to reach those isolated areas, which by the way, used to be those two [inaudible] in the rural areas that hut you see in the pictures in the distance, but more and more the people who are being missed are families living in urban slums, or are people that are displaced or refugees. And so, we've had to adapt and adjust our work with countries to help them be able to identify those families and bring them into their health system. Now, in general, there are reasons why some

people are left out in most countries, they may be stigmatized or they may be very difficult to reach or expensive to reach, but in an era of pandemics, you're not safe unless everybody's safe. So, there are incentives now for countries to really be working with tools and technical assistance from the partners to really find out how to find those last-mile children and families and bring them into the system.

LT: So, Seth, you work with Ministries of Health in these countries to reach these remote people?

SB: Ministries of Health, the immunization programs, but also civil society in some countries, the private sector plays a role in delivery as well. The idea is to try to use every opportunity to get vaccination out there.

LT: How about with covid and covid vaccinations? What did you do?

SB: When we first heard about this disease, of course, nobody knew whether this was going to be a big problem or not. And we first had a discussion about this at the World Economic Forum in January of 2020, and President Trump was down the street saying it wasn't a problem, it wasn't going to be a problem. But at least to myself and Richard Hatchett, who is the executive director of CEPI the Coalition for Epidemic Preparedness Innovations, the two of us sat down and said, is this the big one or is this a dress rehearsal for the big one? But we better start getting prepared. And we began to think about what that might look like, and we created a new effort called COVAX. And the idea there was to try to make sure that developing countries wouldn't get left behind. We knew in the previous pandemics that wealthy countries would buy up all of the doses and there'd be none available for the developing world. That's what happened in the Swine Flu pandemic that occurred before.

SB: So, we began a program, we got many people on site and the support for this was enormous - we ended up with 193 countries joining us and trying to come together in solidarity to move forward. Of course, we had many problems with vaccine nationalism, with export bans and with challenges, but we were able to deliver 2 billion doses of vaccines. And today the coverage rate in the 92 poorest countries of the world, which is about half of the population, is 55% for full vaccination, that compares to about 65% for the world.

LT: What did you learn from covid and from creating and running COVAX?

SB: Well, the first thing is, we were absolutely confirmed that countries will act in their own national interest. And the interesting part of that is that some people said we are naive, you think we'll just supply the rest of the world, and ignore our own countries - that was never the hypothesis. But the real truth is, is that if you don't deal with a global pandemic globally, diseases will continue to come back. And I think this is something that people saw initially - they said, yes, yes, yes, we're only safe if we're all safe. But of course, they wanted their political leaders to vaccinate their country. Only when we began to see Delta, I think, where the funeral piers were in India and then within a month, it was across the entire world again with new waves, and then in Southern Africa with Omicron, people began to realize that this was true.

SB: So, I think the challenge for us is how to deal with this nationalism, and the best way to do that is to continue to diversify the number of vaccine manufacturers. It doesn't guarantee access, but it does help with that. Today people are working on a pandemic accord or pandemic treaty, it's not

sure what it's going to be named, but the idea to try to put better systems in place for the next one. We also provide the vaccine for yellow fever for epidemics, we provide the vaccines for cholera for the world, for Ebola for the world, for meningitis, and so we have experience in dealing with epidemic vaccines and being able to prevent other outbreaks, and a lot of the lessons obviously for COVAX were what we do in regular outbreaks, but one that's much more severe and obviously affecting everybody on the earth.

LT: Seth, bring us up to date. What have you done with manufacturing in different parts of the world and with gaining the technical know-how so that these manufacturers can operate and develop both the standard vaccines as well as any vaccines during a pandemic?

SB: The way the current marketplace works, is there are 19 manufacturers that are out there, and a lot of them, the majority of them are now high-quality manufacturers in developing countries who produce very high volumes at low cost. And that was a model that worked and supplied vaccines during peace time, and did it at a great price. That's how we got the price down. Of course, in a pandemic, what you want is access quickly, and in times when there are export bans or nationalism going on, you want to have access. So, the idea was, could we create new facilities in different places, and the place that had the hardest time was Africa, because Africa needs about 20% of the world's vaccines, but actually had only 0.1% of the production capabilities. We buy vaccines from a manufacturer in Senegal, but only one vaccine. And so, the hope is, is that more manufacturers can develop their capabilities on the African continent. The challenge right now is that there are many, many different countries that want to have manufacturing - last count was 33 different initiatives that were set up. And of course, it would be very difficult for all of those to start from scratch and become viable.

SB: So, one of the challenges is, how do we help the strongest of those become sustainable over time, because that's going to be critical. We don't know when the next pandemic is going to be. It's of course, evolutionarily certain we'll have more pandemics, but we don't know when. So, the challenge is going to be, how do we create some companies that during peace time can make vaccines that are useful, that therefore can be commercially viable and keep their staff and supplies going so that when there is another pandemic, they'll be ready to pivot over to other vaccines and produce those locally.

LT: What are some of the exciting things you're working on?

SB: One of the critical things is how do we bring new vaccines. So many of the listeners may not know that we have vaccines against two important cancers. We have vaccines against liver cancer, that's Hepatitis B, and we have vaccines against cervical cancer, that's HPV. But what's happening now is with the renaissance in vaccines, partially because of the investment made around covid, it is likely that we will have many more vaccines that will cover not just what we traditionally think is infectious diseases, but infections that cause severe disease and long-term chronic diseases like cancer or inflammatory diseases. So, we expect to see more and more of that. And so, we'll see better vaccines. One of the things we've been working on is being able to have the ability to track and trace, to be able to know where the vaccines are, to be able to manage inventories today, most people have access, at least, even if they don't own one themselves, to a phone, to a digital tool, and the question then is how to build a system around that that can help them do their job better. So, we're working constantly on trying to move things forward. The last one I bring out is, we've worked very hard on innovative financing mechanisms, and it may be interesting, I think, to a

general audience on what those are like.

SB: When the terrible outbreak of Ebola occurred in West Africa in 2014/2015, there had been 26 previous outbreaks, but each of them, the largest was around 400 people. And as you say, is this a market - would a manufacturer go through a 10-year process and license the product and produce it regularly for a handful of people? It's not a viable proposition. And so, when West Africa occurred, a vaccine finally got tested and it showed to be 100% efficacious. The challenge was how do you get somebody to produce it? So, we created an advanced purchase agreement that said, if you companies will go ahead and produce and take the vaccine through licensure, we will then buy a stockpile and we'll put money on the table and also pay for the keeping of doses until you have a licensed product for other outbreaks, which there were a number of. So that's an example of an innovative financing mechanism. We did the same for pneumococcal vaccines at the beginning, and we had an advanced market commitment for covid vaccines. It was a way to encourage manufacturers to produce vaccines for developing countries as well.

LT: How else do we prepare for future outbreaks? What do you see ahead?

SB: Well, the most important thing is to do a better job with existing vaccines. You prepare for emergencies by practicing. People say, "Well, I don't know about that," but think about firemen - they get trained ahead of time, they do all kinds of exercises to keep themselves ready and then, of course, they put out fires. Sometimes they're little fires, sometimes they're big fires, but constantly being out there and re-training is how you are ready for emergencies. And then of course, we also do things like have fire-resistant clothing or better houses, make sure they're fire hydrants or sprinklers. We need to do the same thing for pandemics. We need to have a world where we're ready, and the best way to prepare countries to deal with pandemics is to be out there using existing vaccines and do a better job when there are outbreaks of infectious diseases, with unfortunately, increased population, climate change, the changes that are occurring across the world in terms of urbanization, et cetera. We're seeing more and more outbreaks and that will continue. So, the challenge is, during peace time help them build strong systems, help them have the teams in place, and then when a pandemic occurs, you are prepared to roll out products and deal with the emergency.

LT: Seth, GAVI is one of the most successful public-private partnerships anywhere in the world. What do you think accounts for its success?

SB: I think it's a learning organization, it's an organization that measures everything it does, and as a result, we're able to both improve the work we do, but also show value for money, which is critical when you're trying to get large sums of money to be able to move forward on critical issues.

LT: Before I ask for the 3 takeaways you'd like to leave the audience with today, is there anything else you'd like to mention? What should I have asked you that I did not?

SB: I think this has been a very good description of what it is we're trying to do. It's really important to say that by building healthier societies and by preventing disease, you have dramatic effects that go on - children in school learn better, you have parents who don't have to stay home and take care of the sick children and therefore don't get tipped into poverty and you don't need to pay for hospital care if they need to do that. One of the challenges is convincing people that this is an important thing to do. It used to be thought that health was an expenditure, but it's actually an

investment. We can't necessarily use every complicated fancy healthcare technology and tool everywhere in the world, but we certainly can vaccinate children and adults across the world and prevent disease, which is a good thing to do.

LT: Seth, what are the 3 takeaways you'd like to leave the audience with today?

SB: The first thing I'd say is vaccines are a best buy in health, given the benefits that you get from those, and the fact that they've been able to show what they can do in reducing deaths and under five [year old] mortality. And then preparation for pandemics requires an end-to-end approach. What we need to do - we were able to get very quick vaccines for this pandemic, 327 days, but we're trying to bring that down to 100 days - but we need the systems to be able to roll these products out and to make them available to everyone, and leave no one behind. And then, lastly, I think it's important to keep in mind we are only safe if we're all safe. There are no walls that stop infectious diseases - you can ban flights, but even then, diseases still transmit in your own citizens. So, what we need is to have a good global system, you have to have trust in the vaccines and science, as we talked about, and [have] confidence that vaccines are doing what they need to do. Those are three important messages that I think your audience can take away.

LT: Thank you, this has been great, and thank you for your leadership of GAVI.

SB: Thank you so much. Delightful to talk to you.

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