“We work through the government and private sector because they have the scale”: Dr. Buddy Shah, CEO of the Clinton Health Access Initiative, on government partnerships, market shaping, the private sector, and community health workers.

Ambika Samarthya-Howard
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Ambika Samarthya-Howard: If you could please start by introducing yourself and talking a little bit about your work. What I'm particularly interested in is how CHAI [Clinton Health Access Initiative] got involved with eye health?

Dr. Buddy Shah: Okay, great. Well, I'll do a quick version of my full life story in some way. My name is Buddy Shah. I'm the CEO of the Clinton Health Access Initiative. I grew up in a small town in Pennsylvania, Scranton. But every summer I went back to East Africa and India, which is where my family is from, Tanzania and India. And those were just really powerful, fun experiences visiting family. And I didn't think much about it until I was a freshman in college reading John Rawls’ A Theory of Justice in my intro to moral reasoning class. And this core idea or thought experiment that he proposes, which is if you were behind a veil of ignorance and didn't know where in society you'd be born—your natural abilities, where geographically, your gender, ethnicity—what kind of society you would structure?

Through that thought experiment, you should arrive at this feeling that your position in society is an accident of birth, that how well off you are, how happy you are, is so contingent on all of

these things that are frankly out of your control or that you didn't morally deserve because it's so driven by the circumstances of your birth. And just reading that book and thinking about my cousins in East Africa and in India—who had similar genetics to me, parents who cared as much, but very different types of opportunities, especially when Tanzania and India were closed economies—made me want to devote my efforts towards erasing those accidents of birth.

I studied to be a doctor and an economist in order to try to better understand what those drivers of opportunity are, and then how do we erase the accidents of birth. And I think the constant through line in my career as a doctor and a development economist has been how do we use data and evidence to figure out what the most impactful ways to improve people's lives are. And so I did that as the CEO and Co-founder of IDinsight, which was the core mission. And then, as the managing director of GiveWell, which is a funding organization that looks to identify some of the most cost-effective ways either to improve people's incomes or to improve their health and save lives. So that's the long background.

I think the way that that dovetails with how CHAI got involved in glasses in the first place is quite informative because at face value, readers are just not a sexy topic. When I talk about the founding days of CHAI, we talk about the HIV/AIDS crisis. There are hundreds of thousands, even millions of people dying unnecessarily and huge activist energy and CHAI pioneered this field of market shaping, which was basically that HIV was a death sentence.

Pharma developed life-saving antiretroviral therapies, but they are $10,000 per patient per year, and they just weren't looking to reduce the prices in the places in the world where 95 plus percent of people were suffering from the disease. And so CHAI helped to pool funding from national governments, foundations, and multilaterals and then went to Pharma to negotiate and say, "Hey, we can guarantee you X hundred million dollars worth of sales if you radically ramp up production and drop the price." And so through that playbook, we helped to radically drop the price of HIV/AIDS drugs and then partnered closely with governments to help them procure [the antiretroviral medications], get it out to the people, build supply chains, and overcome patient stigma. So that's the bread and butter of CHAI's work of going from a world of high cost AIDS drugs with very low access to a world of very low cost AIDS drugs and super high access.

And that's an exciting story. So the question is, why readers, because they don’t have that same emotional appeal. And the core reason is because once we actually started digging into the research, [we saw that] they are remarkably impactful. Surprisingly so. And surprisingly cost-effective. I think there's two parts to this. One is the health or wellness component of it, and the other is the income component. So if you think about readers, they don't save lives, they improve lives. But it is so cost-effective to get them to people and the measurable improvement in people's quality of life [is so great]. If you look at the public health data, there's something called disability adjusted life years that is a way to try to equate different types of diseases, both ones that kill and ones that merely affect health.

 Getting readers out to people looks very impactful in terms of disability adjusted life years, DALYs, per dollar spent. And so, these numbers will make sense to people in the public health field, but somewhere between $150 to $400 per DALY averted, which is on the same scale as things like the screening and treatment of syphilis, the HPV vaccine for cervical cancer, and other vaccines. Most people think about vaccines as one of the best buys in global health. And just from the health perspective, getting readers out to people who need it is surprisingly impactful and cost-effective because of the big improvement in disability and how cheap it is to get to them. And so just on public health grounds, it looks like a surprisingly important and impactful intervention. And then when you layer on the income returns, I think it starts to become one of the more exciting things that we can work on.

This is a place where we're still doing a lot of research, but so many folks living in low-income communities across India, Sub-Saharan Africa, Southeast Asia, rely on doing close work. So if you think about tea pickers or people sewing, their incomes are often directly tied with how productive they can be, and not being able to see things clearly close to your face impacts that productivity. There've been a number of randomized trials with these communities that show quite large and immediate income gains from getting readers. We're still trying to understand the exact size of the impact and how generalizable it is across geographies—from Bangladesh to India to Kenya. But overall it looks like something on the order of $20 to $50 additional gains per philanthropic dollars spent. So quite a large income benefit. And essentially, the combination of the large health disability improvements and the large income gains, for something that is cheap and relatively easy to distribute, makes it extremely exciting.

[Another reason] why we're excited is we look for programs at CHAI where we can really transform the space in the same way that we helped to do with other partners in HIV. We think there's an opportunity to transform the space in readers and eyeglasses because there's around, depending on how you count it, 500 to 800 million people that have uncorrected presbyopia. It's relatively neglected by the space. We look for things where there's some energy just starting to bubble up, but it's relatively neglected, because that's where our unique marginal impact can be highest and we can turbocharge that effort. And right now you see a small constellation of implementing partners, governments and funders starting to see this combination of a big important problem, a cost-effective solution, and [a space that's] relatively neglected by the rest of the world. And we think it's more or less solvable. We can close that gap of 500, 600 million people that have uncorrected presbyopia and try to do that in a time-limited period.

Ambika Samarthya-Howard: I'm curious about the logistics of things. What is CHAI actually doing around readers?

 **Dr. Buddy Shah:** The big thing that we're testing, through a number of projects in [multiple] countries, is how do we get readers out to the people who need them as efficiently and sustainably as possible. We work very closely with the government of Nigeria and the National Eye Health Program alongside our partners Livelihood Impact Fund (LIF) and RestoringVision. We are essentially supporting the launch of the National Eye Health Program with this presidential initiative aimed at reaching 5 million Nigerians with reading glasses in the next five years. And the way that we're doing that is by integrating both screening and the distribution of glasses into the existing government primary health care system and government primary healthcare workers.

 We think that there's essentially a low marginal cost if we can train those health workers who are already going door to door in these communities to screen for this additional thing and to give them the commodity at low cost to get it to people who need it. By doing more door to door reaching the community where they are, you have a higher chance of covering the people that need glasses because there's such low awareness and you don't have that normal care seeking behavior because you can get through your life without it.

We think that if you actually just go to the people who need it, give it to them, then they see the immediate value, you can get much higher coverage and potentially more sustainably for two reasons. One, it's because it's through the national government village health workers. And secondly, once people get a pair initially, if you can fix other parts of the supply chain, we have a hypothesis that they're going to have a demand for a second pair going forward because you see such immediate benefits. So that's one type of program that we're doing in Nigeria on the public sector side.

Ambika Samarthya-Howard: I'd love to hear about the whole range of programs you're working on.

 **Dr. Buddy Shah:** We are also working in Cambodia, South Africa, and Uganda. So in Cambodia it's again, really trying to think about how to integrate this into existing public health programming. And there's a big push in Cambodia to start scaling non-communicable disease services. As Cambodia starts to get a better handle on malaria, TB, HIV, they are seeing a huge rise in diabetes and hypertension. And so as they're retraining government health workers to be able to diagnose and screen for those diseases, and we're integrating presbyopia screening alongside that. It's still small scale, but we've seen in the pilot, just since earlier this year, a 60% increase in vision screening and 26% increase in patient appointments at vision centers compared to last year. So that's a pre-post [test], a pilot scale, but I think what we're seeing is that you can very quickly bump up vision screening and then the question is going to be, can we

fix the supply of glasses for that to translate into more glasses on people's faces who need them? And how durable or sustainable is that?

 In South Africa, it's a very similar program of retraining government health workers to screen for readers and ensuring that they have the supply at facilities. And again, that's still just a pre-post, but we've seen glasses dispensing rates increase by 20% in just a couple of months of introducing that program. Of course we need to track it further to see how durable that is and how it compares to places without the program.

 And then in Uganda, we're collaborating with EYElliance to conduct presbyopia screening and delivering reading glasses in rural areas, but also trying to look at the private sector, which is going to be very important in any eventual solution to support private optical shops in the public hospitals. And so that's earlier stage, but we are really trying to think through how to better support a robust last mile private sector for readers.

Ambika Samarthya-Howard: That's great. I want to focus specifically on that private sector aspect. Do pharmacies play a role in that? Or when you say private sector, what exactly are you referring to since private sector in a lot of these countries can mean very different things?

 **Dr. Buddy Shah:** Yeah, that's right. We want to have a pretty expansive definition of private sector, so certainly pharmacies, and you can also imagine social entrepreneurs building optical shops. But the reality is, as you know, say where I live in California, you can just hop into a CVS and there'll be a whole row of readers. And so essentially we want to take that user-centric perspective of where a prospective person who needs readers is going to show up to buy things in general, what's going to be the easiest path to get there? Certainly I think pharmacies and optical shops are an important part, but there's also local village or small town shops that carry an assortment of items that people need. And we want to think about building out the supply chains and stocking those kinds of small convenience shops that exist in small towns and rural areas in the geographies in which we work. But I would say that's early thinking.

Ambika Samarthya-Howard: What makes this different from the other work that you do in health, particularly from an implementation and a larger scale zoomed out perspective? How are the benefits and the challenges different?

 **Dr. Buddy Shah:** I think one big difference is that depending on the country, reading glasses are regulated very differently from most other health commodities. And so that provides a great opportunity on the procurement side, and on the distribution side, because most other things we deal with—whether they're diagnostics, drugs, vaccines—have a very high regulatory bar which affects who can screen as well as who can distribute. And I think here we have more

programmatic latitude and of course we want to be careful about that because it's still a healthcare commodity. But I think it allows us to be more creative in thinking about efficient channels to get these to the people who need them.

The second big difference is, as you said, the problem itself is just different in character to a lot of the [other] problems we face, which is that we have a hypothesis that because you see such immediate benefits [from readers], there's a potentially faster route to sustainability via market mechanisms and a shorter duration or amount of ongoing public sector philanthropic subsidy [that is needed]. Now that's not completely the case. I think very low income people, we always want to either subsidize or provide readers for free. But there's an entry point where, if you get that first pair, and if we solve the supply chain and availability problems, we think a reasonable percentage of the population are going to want to buy that second pair. And that will lead to a virtuous cycle and make it much more sustainable and cost-effective. Again, let's test it and see if that actually ends up panning out. But that's our point of view.

 And then there's a lot of ways in which it is similar. One part of our work involves driving down the cost of glasses. They're already pretty cheap, but so much of CHAI's work in other disease areas is this market shaping, which is on two levels. One, how do we provide incentives for the pharmaceutical companies producing a health product to drop their prices? If we can guarantee a company higher volume, then they can make the investments in an extra manufacturing line and get their costs down. So we're thinking about market shaping at the level of the makers of these glasses. How do we reduce their prices? But then secondly, and we've seen this in other areas as well, there are all these markups once it gets into the country. So the glasses ship from China or Italy to Nigeria, and once they're in country, you see a lot of price markups once they actually reach the end consumer.

Ambika Samarthya-Howard: Can you tell me some of those things that you do to reduce the price as it goes through the process of getting to the consumer?

 **Dr. Buddy Shah:** Sometimes there are import taxes for certain commodities, sometimes not. So that's the first one. And then it depends on how many people's hands it touches before it reaches there. It gets to the port city, then to the next big city. It passes hands, there's a markup for that middle person and then to the local shop. And so at each of those points, there's someone that's charging a markup for that particular part of the supply chain. Essentially taxes and markups by middlemen are the two core reasons.

 And there's actually a lot of ways that we've changed that in other areas that we're hoping to try here. On the import tax side, CHAI regularly negotiates with the government for certain health commodities to get included in the list of essential medicines for that country, which often leads to waivers on import duties. So there's a whole body of work around that country by

country. And then the in-country supply chain markups, there is the extent to which the government has control over the procurement and the distribution of the commodity. It oftentimes means that they can contain or eliminate those markups. And so in the community health worker version of this, [the product stays] within the government system—from the port to the last mile—and so that gives us an opportunity to remove all of the markups.

 On the private sector side, [we can reduce markups by] doing bulk procurement. Some of the markups come from the fact that every little shop owner is finding their own middle person, and that middle person is finding their own thing, versus if you can create a bulk procurement platform that essentially allows that last mile optician's office or pharmacy or little village shop to access the same price as someone who's buying wholesale. And then of course you need to figure out how to get it to them. We've set up bulk procurement facilities in other areas for reproductive commodities at the national level that allows even the small shop owner to get wholesale type prices. So there's a bunch of different mechanisms that we're thinking about playing around with to reduce those in-country markups.

Ambika Samarthya-Howard: Oh, that's fantastic. That must have so much to do with how much scale you have and the ability to learn all of these things across different countries must be really helpful.

 **Dr. Buddy Shah:** Yeah, for sure. You can't port over solutions exactly, but you definitely can get inspiration and then tailor things that have worked with say contraceptives or other areas to new ones. The last thing I'd say on this topic is that another big difference between the glasses space and other areas—like HIV, malaria, and vaccines, where we've had a lot of success as a global health community—is that those areas have very large sustained global funders. You have the global fund for HIV, AIDS, malaria, you have GAVI [Gavi, the Vaccine Alliance] for vaccines. And what that does is that it provides that negotiating power with the private sector because they can guarantee we're going to buy X million doses of a malaria diagnostic or an AIDS drug.

 And so we don't have that in the glasses space. There's no large single global fund, a GAVI type institution that can provide negotiating power as well as a sustainable signal to national governments to invest in their own program side by side and get some matching funds. It's not that every single problem in global health requires a global fund or a GAVI type multilateral large funding vehicle, but that is an important difference. And we're going to need to think about how to design around that or whether to try to create something that's comparable.

Ambika Samarthya-Howard: CHAI works very fundamentally in scale, but yet you are also, I assume, successful because of your hyper localization. I was wondering if you could just talk a little bit about how you see both things working.

Dr. Buddy Shah: Yeah, for sure. Probably the most repeated mantra within CHAI is that we work at the service of governments. We don't do any implementation ourselves, or it's extraordinarily rare that we do. We work through the government and private sector because they have the scale, they're the most sustainable, and also they have the most nuanced local contextual knowledge. And so I think one part is that designing through the government and private sector forces you to think locally, not just nationally as you said, but hyper locally.

If you think about these health worker training programs, there's obviously the national level training of trainers that happens in a country like Nigeria, which is so diverse. We're [also] working in 10 focal states. And as it cascades down to the state level, there is standardization of parts, but then also tailoring at the state level and then the sub state level. So I think part of good program design is creating the space for those variations to happen.

Second, our country offices have a lot of autonomy in program design. And so there's this very synergistic collaboration between our global program teams and our country teams where we are learning from things that have worked and not worked in different disease areas and in different geographies across the world. [We] have a mechanism for thinking globally, but then these extremely strong country teams that have deep contextual knowledge of sub regions and the constraints and opportunities in them so that in working with those global program teams can help design the most appropriate local programs.

Our organization as a whole is 80% nationals of the countries in which we work. Our leadership team is comparably around 70% nationals of the countries in which we work. And every single program is designed with the government in a leading position, which helps. And then also this really valuable partnership between our global program leaders and our country program leaders that help to ensure that we're not doing anything in a cookie cutter manner from one place to another, but adapting and tailoring to the specific needs of a country or a sub-region.

Ambika Samarthya-Howard: What's been the biggest challenges and what do you foresee as some of the challenges to be in the eyeglass space?

Dr. Buddy Shah: I think first, the optimistic view is that this work has been going on for two decades. There's been partners in it for longer than we have. EYElliance, VisionSpring, there are others that have been beating this drum for a long time. Sometimes what we see in global health is that you have this long drum beat of dedicated advocates, and then because of some set of contextual factors, there are these inflection points. Maybe that's what's happening here.

The challenges I see are, number one, going back to the start of our conversation, it is just not a sexy topic and so it's been ignored. We need to change that by really making that impact case clear, both from an analytical perspective and from the perspective of how it changes lives.

Number two is that it's interesting because it falls between different worlds, right? Yes, it is a health intervention, but it also improves incomes. And oftentimes we've seen for programs that straddle, say health and education or health and agriculture or health and livelihoods like this, it can fall through the cracks of both of those spaces. And so I think that's another structural piece that's going on here. The third [challenge] is that it's a private sector and a public sector thing at once, and so again, that gives opportunities for it to slip through the cracks. So I think those are some of the reasons why despite that drumbeat for two decades, it's not yet fully taken off.

 In terms of challenges going forward, I think there is just some hard blocking and tackling we need to do to figure out the most effective ways to distribute these. We have a bunch of hypotheses. We're testing them via community health worker programs, via private pharmacies, but we really need to nail how we actually get [readers] out to the people who need it most efficiently. We haven't found the perfect model yet. So there is some figuring out that we need to do, and I think how quickly we figure that out and how good the answers are in terms of dollars per glasses delivered is important. We also need to crowd more funding into the space. We certainly have some exciting early interest, of course, but any global health program that's really transformed a space has done so by building momentum amongst national governments putting in funding themselves, multilateral bodies, and philanthropic capital.

And so we need to build that impact case, that investment case, and convince those key stakeholders that are going to provide the funding. I think in this case, the investment case is very strong. And it's actually much smaller amounts of money than we're talking about for some of the previous diseases because of how cost-effective the solution is, how potentially time-limited it is, and how sustainable and that there's a cap number of folks who need it. But we need to overcome the larger scale of financing it.

Ambika Samarthya-Howard: I feel like one of the ways that this has worked, especially with community health workers, has been around bundling this with other healthcare services. Is that what your community health workers are doing across your countries? I'm interested in workload, capacity training, and also incentives. How do you ask people who are not making great salaries to do additional work and labor?

 **Dr. Buddy Shah:** Yeah, a hundred percent. So I think the non-answer is that we need to learn a lot more about it as we roll these programs out. We're in early days, and I think it's exactly the right set of questions to be asking. There are two hypotheses we have. One is that actually in a lot of the countries in which we work, the community health workers do have additional capacity to learn about screening and provision of new commodities. They have the time, skills, and the workload [capacity] to do that, which is why we're trying it.

But it's going to be really important to think through the incentives piece carefully, and whether it is an incremental financial incentive to add on for each additional commodity or whether it's wrapped into more of a salary structure where community health workers are guaranteed more reasonable wages. And all that's going to vary country by country, I think, because if you look at community health worker programs across the world, they are set up very differently. And so we just need to adapt. In some countries I imagine it'll be an additional incentive for that health worker to screen for and provide glasses. In other cases, they'll receive a flat and hopefully appropriate wage for the importance of the work that they're doing. We need to integrate this as the core bundle of services and commodities that they provide, but we need to do it country by country and think very carefully about that.

Ambika Samarthya-Howard: Can you talk more about the thinking behind people being willing to buy a second pair after receiving a first?

Dr. Buddy Shah: There's two ways I think about it. Number one is if you just look at the impact numbers and what we think we can hit in terms of dollars spent per glasses distributed, it is just really cost-effective even if you need to give out the pairs for free forever. And now that's not the case I want to make or say that's going to be the reality, but it just makes sense in that the worst case scenario is where you subsidize it for free forever. It's so cost-effective.

Now, the cherry on top could be that once people get a first pair, they're willing to buy a second pair at full price, or maybe a discounted price, if they have the availability near them. And I think we just need to test that rigorously. I would want to see well-designed studies that help us understand that in a robust way.

Ambika Samarthya-Howard: You shared important insights about how you were able to take some of the insights from your other work into your eyeglasses work. On the flip side, are you seeing anything from your eyeglasses work that you have been able to apply to other programs?

Dr. Buddy Shah: The general way of thinking about how to prioritize programs where it's an important problem, a highly neglected [problem] with some core energy behind it. So it's not so neglected that we're never going to be able to overcome it, but it's neglected enough. And then the cost-effective, scalable solution where we still need to figure stuff out that general shape of an idea. I think we have taken that lens for other parts of our portfolio that we think could be really transformational. And also thinking very intentionally about how you build a collaborative of governments, implementing partners, and funders, and it's been a great test case for how to make that case to different types of partners in a relatively new space.

Ambika Samarthya-Howard: I'm curious if you can talk more about how to build a successful government partnership. You're working in very different places. Are there some tried and true methods of partnering with governments that you feel have really worked? Particularly with your work in Nigeria?

 **Dr. Buddy Shah:** For CHAI, our story from inception has been working at the invitation of the government. So in all of our countries, we work at the explicit invitation of either the head of state or the Minister of Health, and it's been that way since we started. We've had a presence in a lot of the countries where we work for 20 years and the form in which we work is often our CHAI staff embedded within the ministry. [They are] sitting in those desks and internalizing the governance problems as their own. So even if we're funded for project X, our staff are just flexibly helpful across any emergent things that come up, and that builds incredible trust. Both having been there for a long time and working in that way builds a lot of trust. And then you're right, each of those countries are very different and there's a lot of tailoring.

But those core things, that we're always there at the explicit invitation of a senior person, they've seen us around for often many decades, and third, we are true team players and really internalize the full set of their problems, not just doing our projects. We internalize the government's priority. I think those three things really help. And then the last is just putting the government front and center. And so oftentimes we try to stay in the background or behind the scenes, and I think that helps tremendously as well.

Ambika Samarthya-Howard: What are you looking forward to in the next year on some of these programs?

Dr. Buddy Shah: The main things I'm looking forward to over the next 12 months are, number one, actual results from whether we can be in a sprint mode and scale up glasses to a large number of people via the government. Is it a sustainable channel [to scale] quickly and efficiently? And if we can, that's going to be extremely encouraging because it really is a sprint mode. It will demonstrate that the power of government buy-in at a presidential level plus a committed funder and NGO collaboration that can move quickly is very promising in one of the most high impact, but also challenging places to work.

And then if we're able to have a few of those kinds of proof points, I'm very keen to see how much we can use that to build momentum for a real global push around transforming this space. And so I do see the next 12 to 24 months as really critical from demonstrating the proof points to building a much larger scale order of magnitude, a larger ambitious agenda around this 500 million person solvable problem.

Ambika Samarthya-Howard: Thank you, this has been a great conversation.

ICON LEGEND

Ambika Samarthya-Howard (she/her) is Solutions Journalism Network's Chief Innovation Officer. She strategizes on communications, metrics, impact, product and technology, leveraging platforms for the network and creating cool content. She also leads the Solutions Insights Lab, an initiative of SJN that uses targeted research and analysis to identify and interrogate what's working and what's not in a particular sector or field. She has an MFA from Columbia's film program and has been creating, teaching and writing at the intersection of storytelling and social good for two decades. She has produced content for Current TV, UNICEF, Havas, United Nations Population Fund (UNFPA) and Prism.

** This interview has been edited and condensed.*