Phone conversation between Nyaya Health (Duncan Maru, co-Founder and President) and GiveWell (Elie Hassenfeld and Natalie Stone) on March 17, 2011

GiveWell: How did Nyaya Health get started? How did you choose that location and that approach?

Nyaya Health: 5 years and 5 days ago, a colleague of mine in medical school, Jason Andrews, who's now an infectious disease doctor in Boston, emailed me and one of my other close friends Sanjay Basu, who's now a doctor in California, about a trip he had been on to this place in the far west of Nepal, which had been one of the epicenters of the Maoist movement in the civil war (which was still ongoing at the time).

He and his wife had gone out there with an HIV organization to document the HIV epidemic. They found a profoundly impoverished health system that was far removed economically and socially from the government in Katmandu. Jason described the discussion he had with a room of 20 HIV-infected widows who had very little time left to live and who described the state of the health system there to them, and he asked Sanjay and me about what we could do.

Both Sanjay and I had worked in Delhi and had in interest in South Asia. We put some thoughts and proposals together, visited the area, and put together an amazing group of folks. We had a model in mind that borrowed very heavily from Partners in Health and another group called the Comprehensive Rural Health Project from Maharashtra, India. We also had an idea for an open-access, open-source initiative. Those had an impact on how we'd run the organization.

We had a primary health location that we turned into a health clinic. We turned it over to the government after a year, and now we're running the hospital along with the Ministry of Health. Our primary local objectives are to support the three main pillars of the government health system in Achham. We're focused on the health-post/health-clinic level.

We also have a community health volunteer network, which are grassroots people we provide training and funding for.

GiveWell: If you were in our shoes, what would you do to assess quality?

Nyaya Health: It's a really difficult question. So much of the quality of healthcare happens at a very micro level, at the level of the patient and the provider. I very much believe in data and that's where your evaluation would have to go, but I'd qualify it that, from the patient's perspective, the patient-level interaction between patient and practitioners so much determines how they experience their illness.

If you really want to know, you just have to go there and see what it's like to be a patient.

There are things that come out of the compassion of the provider, and I myself deeply value it and it's very difficult to teach.

Apart from going to Achham, trying to get some sense of how providers at the hospital think about disease and the approaches they've taken is helpful. Seeing videos and reading patient stories is valuable. That qualitative piece is very important.

The other part, and the part that Nyaya Health is still very much in its infancy for, is the quantitative element. The document that we put together for impact evaluation laid out the most rigorous possible assessment. If I'm comparing my impact of, say, $50,000 to not putting that money in, I have to assess what is the current level of healthcare in that area and what is the base case. Even a place as remote and impoverished as Achham where we felt there was a compelling need, it's not some tabula rasa on which you build some new health system. There's an extensive network of lay providers, minimally trained medics (some might call them "quack doctors") and they provide significant value to the community even if some of what they do causes harm or does nothing at all. If you're trying to look at community acquired pneumonia which requires antibiotics or IV-antibiotics or IV-fluids, those are all available among these lay providers, though they're often providing 4 antibiotics at once which can cause resistance and side effects, and can bankrupting patients. Often the wealthiest people in these areas are medics.

Fewer people are dying of community-acquired pneumonia than would be if they weren't there. On top of that, you're providing some marginal benefit.

If you ask me about our impact in the last 5 years, I'd say: we've seen 60,000 patients and done x number of deliveries. We also see kids come in with dehydration or TB or pneumonia who probably would have died without medical care and we can document we've cured them.

GiveWell: Should we worry about quality of care? What else should we look at?

Nyaya Health: When I'm out there, my fundamental preoccupation is, "Jeez, I'm not in Children's Hospital of Boston anymore." It's a good question. It's just a hard thing to figure out quality health care from 10,000 miles away. A good basic metric (that we're not good at yet) is follow up rates. A typical medical culture is that you really put the onus on the patient. You prescribe medicine and it's in the patient's court to affect change in their health. It's really hard for you as a provider to assess your impact if you're not in touch with that patient subsequently. You really need to be in touch with patients down the line.

As a proxy measure for quality, can someone say, "We treated x patients for pneumonia and we followed 98% of them back to their homes 7 days later, and they're still alive." You still can't say that 'with $5, we saved x lives from pneumonia.' But, you at least can say that the system cares about following a patient. Within Nyaya Health, that's a big challenge for us to work on. It’s not part of the health system to do that, but we have a responsibility to assess what happens with them.

At a very basic level, can an organization say, are we following them up? For Nyaya Health, we have those numbers for HIV and TB and for malnutrition, but that's one way to look at organizations: do they value follow up? Are the patients getting better? Diarrhea and pneumonia has follow up times of weeks; TB is months. Where are the patients and what are they doing?

It's not easy because 20% of our patients come from more than 8 hours away. We'd need an extensive community health network to really follow our patients. We've made significant progress over the last 6 months in that realm.

GiveWell: You said you have this for HIV, TB and malnutrition. Could you share this with us?

Nyaya Health: I can forward that along. There's a blog post that will give you a few of them. I reviewed a bunch of programs and put in numbers for those programs in the text.

You're not going to have too much longitudinal data, which is the most powerful kind of data. We're only really getting our data system back up.

GiveWell: Do you think quality is a problem and how does it manifest itself? That is, how big a deal in lives-saved/improved terms are problems of quality?

Nyaya Health: It is pretty remarkable to have a hospital where folks come to work everyday (compared to government-run facilities where it's a few days a week), and they're providing valuable services, and running that, last year, for $160,000. That's pretty remarkable. I can see with certainty that there are many lives saved and that the number is, between the cholera epidemic, deliveries, TB, and diarrhea/pneumonia, well over 100 lives.

There are some complex cases where we can't say that we gave the patient everything modern medicine can offer. For example, there was a woman with visceral leishmaniasis, who we got a free ticket to Katmandu and we gave her all the medical treatments that we could, we followed up, we worked with her family, and she ended up dying in the ICU on a ventilator there. When I was in Achham, I met her father, and I couldn't look him in the eye and say we gave her the very best in modern medical technology, but I could look him in the eye and say for what we had available to us, we did our best.

GiveWell: How important do you think the problems of cleanliness and staff training are?

Nyaya Health: It'd be great to have tiles and better lighting, and I think that has an impact on the patient's experience. There are a lot of folks that would take their medicines more regularly and do better preventative care if they had more confidence in the medical system. Cleanliness and staff professionalism makes a difference to those types of things. But, whether we have tiled floors or a very clean environment doesn't impact too much infection control rates because so much of in-hospital and medicine-created infections is

because we have patients on immuno-suppressants and on ventilators; we have central intravenous lines and those are things that get infected.

If you had a cholera outbreak or a ward of patients with TB, cleanliness could have an impact on infection control. But, generally, cleanliness has more to do with overall dignity of patients, and I think it translates into outcomes because if you're a patient and treated well, you're more likely to come back and follow the doctor's advice.

As far as staff training, I disagree with Ryan a little bit. Our head doctor knows more orthopedics than any advanced doctor outside of a specialist in the US. We don't get the training here because we have orthopedics specialists. At the same time, he doesn't have some advanced training that even someone only a couple years out of medical school would have here. He has a lot of skills that are pretty appropriate to what he's doing. He can't diagnose a lot of conditions because he doesn't have the lab tests for it, or a CAT scan. If someone comes in as a stroke victim, you have to base it on your clinical exam. And, there's not too much you can do. You don't have the expensive treatments available for stroke victims in the U.S.

The biggest thing that our staff lack is professionalism, the belief that when you see a patient, you're responsible for them and whether your treatments work or not. However, I was really impressed by how folks were treating patients here.

The tangible differences between Achham and the U.S. are just that if you have something out of the ordinary or more complex, you're going to want to go to a tertiary care center, and you're not going to be well-served by Achham, but we're able to impact most of the common ailments that don't require advanced technologies or advanced treatments.

GiveWell: What other experience do you have with global health? Have you been to other hospitals? Have you visited any PIH sites? How do you think the quality of care at Nyaya Health compares to the other sites you've been to?

Nyaya Health: I will be going to some PIH sites over the next couple of years, but I haven't been to any yet. I've been to some hospitals in Bolivia, Guatemala and India, mostly in a fairly urban, more advanced care settings. It's very tough to make comparisons.

The hospital I worked in in Delhi was one of the most advanced hospitals in India. They're doing cardiothoracic surgery. They have an MRI. They have tremendous resources. When I asked the nurses what a patient's heart rate was, they had written something down and I asked them what they had done, because I had gotten something different. It turns out that they didn't know how to take vitals all that well. And, these were nurses at India's top medical college where they were doing pretty advanced medical stuff.

GiveWell: How does Nyaya Health compare to other hospitals you've seen?

Nyaya Health: Achham is the most remote place I've been in. It's a different world than urban India and urban or rural Guatemala or Bolivia. Its remoteness is pretty striking. You're just out there and you're it.

All that said, I was pretty impressed at how well folks were treated. We don't have the kinds of resources that urban centers have. We hope that eventually we will. I just, myself, haven't been and I don't know if I've come across anybody who works in a more remote place. I've talked to the PIH folks, and maybe the Lesotho folks, but even they can fly in planes.

It is a pretty remote place and that's one of the reasons why it's so compelling.

GiveWell: How much time have you spent in Achham? How much time do you plan to spend in the future?

Nyaya Health: In total, I've spent about three or four months. It's not a huge amount. I was out there initially and helped set up the original clinic and did a lot remote consulting. In our early phases, we were really operating at a very marginal level. My role initially was to do site surveys and set up the clinic and provide the guiding hand to everyone to manage the set up. It was really not the right way to do it all, but we're way past that now.

I was just out there now, and I hadn't been there for quite some time because of family and work obligations. My long-term trajectory is that my wife and family and I will be based in Northern India or Bihar or far west of Nepal. For now, I've been in the US a lot.

GiveWell: What is the schedule of visits by non-staff medical professional to the hospital, i.e. how often are observers there?

Nyaya Health: Our Executive Director is an ex-pat who lives there and that's a critical communication link for us. People go out there pretty regularly. We have a reasonable constant ex-pat presence, and when I say ex-pat, I also include Nepalis who are part of the Nepali diaspora in the US. The value added of someone like Michael Polifka is huge. The staff loved him. His biggest impact comes from modeling professionalism.

We normally have 1 or 2 out there at all times, though it's not part of our model. They're not there to provide direct medical care, but they're there to train. They're only there for a few weeks, but they have an impact on knowledge dissemination.

GiveWell: What funding do you get from the government? Is that per patient? And, what percentage of the total is covered by the government?

Nyaya Health: Ryan would have this data. It's around $40,000 per year from the government. We have a contract with them for 5 years. Last year it was around 25% of the budget. This year, we applied to them for it to be 1 cror, which is about another

$100,000, in the context of expansion. I think we have a good shot at it. It's $40,000 now and somewhere between $100,000-$125,000 in the coming year if it gets approved.

GiveWell: How did you estimate base-case and Nyaya-case in the cost-effectiveness calculations?

Nyaya Health: What I put together is a framework for how we'd think about assessing efficacy. Those numbers are just my take from my experience and from what I've seen and read about community-acquired pneumonia. Until we can actually collect outcomes, you can only estimate it.

The base case is really hard to get at.

GiveWell: Other organizations you know and recommend?

Nyaya Health: I'd have to think about it. I think big organizations like MSF and PIH are incredible. I think that they operate pretty transparently, about as well as an organization of their size can.

Other small PIH partners like Project Muso and Tiyatien Health are very transparent and have different strengths than us on the transparency front.

A lot of what led us to make the wiki public is because it was easiest way to do business since we were all volunteers, and password protecting is cumbersome. I also always thought that open access projects and open source software are really amazing.

GiveWell: Any thoughts on charity programs that send physicians on trips to the developing world, such as the organizations the send surgeons to repair cleft palates?

Nyaya Health: It's a fundamentally different model. It's very useful. The bottom line is they're getting kids with cleft palates are at risk for all sorts of bad things and the surgeries aren't accessible. If you can restore sight by removing a cataract, you're doing a great thing.

The other great thing about them is that you can have fairly clear outcomes. Sometimes they're not great on reporting 30-day complication rates because they'll come in and do the surgery and leave, and the only way to do that is to reassess the patient after the appropriate time. I do think they have a substantial impact on patients' lives.