Phone conversation between Nyaya Health (Ryan Schwarz, Director of Operations) and GiveWell (Elie Hassenfeld and Natalie Stone) on February 17, 2011

GiveWell: How do you monitor of quality of care?

Nyaya: This is probably our weak point at this juncture.

The idea of the wiki is still an aspiration and the main reason why it hasn't been updated is because of limited human resources capacity. The organization is young; it was founded in 2005. We didn't begin seeing patients until 2008 and just a month and a half ago hired our first full-time staff member in the US. We have about 30 staff members in Nepal, who are involved in providing care in Nepal and doing the day-to-day administration.

The monitoring and evaluation has been handled by a volunteer team. The wiki worked well for a while, but in 2009, we signed a much larger contract with the government and took on more on the ground all at once. At that time, due to limited capacity, we ended up not being able to maintain the wiki data monitoring as well as we had been.

We had to completely overhaul our electronic medical records system to keep in line with government reporting requirements and train new M&E folks on the ground. Setting this up to sync the wiki and database was tough. In the last month, we got our ducks in a row, and we hope by March or April 2011 to be monthly syncing the live database with the wiki.

The frank answer of why it hasn't been updated yet is we could've done the manual upload to the wiki for the last 6 months, but knowing that we're developing a more robust and automatic technology, we've been holding out for that new solution before we update the wiki again.

The data monitoring is still intact and we've been reporting monthly to the Nepali Ministry of Health.

In terms of what we monitor and how it's externally validated, I think that's another weakness of Nyaya, and, frankly, medical organizations as a whole. We do reporting but the degree of external validation is limited. We're responsible for reporting all basic health metrics from maternal care to immunizations to pills of ibuprofen given out. But, I'm not sure what you consider external validation or the degree to which our reporting would meet your standards.

GiveWell: Could you share the monthly reports to that you prepare for the Nepali government with us?

Nyaya: Yes, we could get that translated and could get that to you.

GiveWell: Is there any internal vetting of that data to check its accuracy?

Nyaya: The way our data is recorded is two-fold. The Nepali reporting system is hardcopy on paper. That data manager on paper verifies the paper records and by hand he manually enters summary statistics into our online medical records system. The third step, which hasn't come online yet, is a validation of all that data. This will be done by our M&E volunteer team in the USA following regular data exporting to the wiki.

There's full-scale validity checking from the hardcopy to the electronic medical records but no external process.

GiveWell: What does it mean that the data manger "verifies" that data?

Nyaya: The data manager uploads it into the electronics database, but doesn't go back to patient's chart. He corrects any obvious errors.

GiveWell: Will the upload of data to wiki include future data or also past data?

Nyaya: Not sure. It will probably include some older data—probably going back to September 2010.

The first facility Nyaya ran was a health clinic and that's where most of the data on the wiki came from. Then we transitioned to a hospital complex and it took about 8 months to get the hospital up and running and the data from that period is only on paper, so that wouldn't get transferred to the wiki.

GiveWell: What gives you confidence that care is of high quality?

Nyaya: Care quality is not a responsibility under my role. We have a dual organizational structure. We have a volunteer community in US that I run, which does fundraising, development, and marketing. We have about 30 full-time staff in Nepal who handle the actual operations of our on-the-ground work.

We have two representatives that are officially working for the U.S. 501(c)3 in Achham. They are the day-to-day liaisons between us in the U.S. and the team on the ground. They're our main point of contact.

There's a lot of quality checking that is done by the government as per our contract.

The INGO is confident that we have good accountability mechanisms and that we know what's going on in Achham. I'll qualify that by saying it's a resource-poor area, so quality of care is a relative term. I wouldn't claim that the quality of care that our staff provides in Achham would pass for quality at a U.S. hospital.

This is one of the things our organization grapples with a lot and how we can improve quality.

At any given time, there's typically another INGO person over there. I spend 2-3 months there per year, and there's a constant stream of information between INGO and NGO.

GiveWell: How would quality of care in Achham be different than a hospital in NYC?

Nyaya: I think it's the best care within 15 hours of where we are, but the walls and floors are bare cement, not tiled, and it's a dusty area so it's hard to keep clean. There's a monsoon a few months a year that floods the area and we have no flood protection.

Our technology is limited. We just got the first x-ray machine in a 6-hour radius.

The training of the staff is necessarily inferior. In Nepal, the way it works is in medical school, the majority of doctors get placed at rural health posts or hospital after medical school. Most don't do a residency as we would do in the U.S. Our senior-most clinician has about the training of what a first-year resident would have in the United States.

Our mission is to work with the public sector. The training of clinicians is not the standard you'd see in a U.S. hospital, and we've tried to supplement that as we can. We send our staff to trainings in the capital intermittently and also supplement with additional training at the hospital.

Supply chains are always a problem. We've gotten to the point where we're not having regular stock outs, but stock outs in a place like ours are a challenge. We do order in bulk as many medicines as we can for 4-6 months storage, but stock-outs still do happen.

There was a period in 2010 where we ran out of all morphine products for 2 months. So, our primary painkiller was out of stock, and that was simply as a result of the fact that it was the end of monsoon, the roads were down, the factories were out of stock, and it took time for the supply to come back in Nepal.

We've changed our ordering protocols in last 9 months to try and address this, but it's still a challenge.

Another way in which our quality of care is below a NYC hospital is with regard to referral capacity. In NY if you see a primary care doctor and they decide you need to see a specialist, you walk down the street. For us, the next facility with better care than we can offer is about 12 hours away. So patients face economic obstacles to get there.

Six months ago, we started an ambulance service, donated by the Indian government, and can now offer transport for free.

There is a public bus that only costs about $0.30 but that only goes once a day and can take 10 hours or more. Many patients present in some form of emergency, e.g., hemorrhaging after birth, and can't wait. So, the only option is a private jeep and those can be extremely expensive.

Since we only have one ambulance, if something happens in the morning, and then someone else comes in in the afternoon, we don't have transportation for him or her and he or she have to pay for the jeep.

When we have patients after some trauma who need a CT scan to check if there's bleeding in the brain, the nearest CT scan is 17 hours away and a lot of patients die in route.

GiveWell: Do you have any documentation that summarizes the challenges you face?

Nyaya: I have PowerPoint presentations that summarize challenges, but that requires a person to give them. The closest thing I could offer is our annual strategic plan, which outlines the approach and the plan of what we're doing but doesn't systemically frame it the way you're looking for.

I can provide you with other documents that we only give to the Nepali government.

GiveWell: Would you have to spend time translating the data reports to Nepali government?

Nyaya: They're just tables with headings in Nepali. Not much of a challenge since it's mostly numbers. There are forms that the government standardizes across the whole health system, with information such as: How many babies were born? How many in antenatal care visits? How many surgeries?

GiveWell: Do those reports contain information about how well treatments went, i.e., success rates?

Nyaya: Success rate is a really difficult term in medical care. There needs to be a different outcome measure of what success is for every condition. Defining what success is after a surgery is very difficult for example. We have some outcomes measures, but to what extent that constitutes success is a question.

We report, for example, how many patients have TB and are on treatment and finish treatment. But, we know a lot of patients will go out and get TB again in the future.

We do have specifics on how many patients we had that month and how many we

discharged that month.

We could also send you the whole de-identified patient database if you want it. It's a Microsoft Access database. It's 15-20mb.

GiveWell: So you track any sort of overall indicators of health in the area: mortality, morbidity, etc.? Did you conduct a baseline?

Nyaya: We did do a rapid health assessment (our own epidemiological survey). I can give you those. Those are from early 2007. That was a relatively small sample though hypothetically representative. The district health office has annual reports.

We haven't done follow up surveys. There probably hasn't been a population level impact. It's a rural area with 270,000 people in the district. Our catchment area is that district and 2 more districts to the north and since we opened the hospital we've seen a lot more visits from the 2 to the north and our surveys were only for our district, not the full area from where we've seen patients.

We have an obstetric program where women are offered a financial incentive to come to antenatal checkups and have their birth in a facility. These programs are quite common. These are really just paying for lost labor and transportation costs and since instituting these we've seen more women coming. We have data from that, because it's easy to monitor, but I doubt we've had a statistically significant effect on a population level, but we don't have that data.

GiveWell: What would you use additional funding for?

Nyaya: There are two primary domains and I can give more detail on each.

There's hospital-based care and then community based care. Within each domain, there are a number of priorities.

In the hospital domain, we have the following priorities that we want to raise money for this year:

1. Develop a full-scale operating room and full-scale obstetric, orthopedic, and trauma services. This wouldn't be for the most complex surgeries such as heart transplants, rather for the types of procedures that could cover the vast majority of surgical morbidity and mortality in the area.

2. Solar power. We've recently started a new partnership and are trying to develop a fully sustainable solar power service in the area. This would give us reliable energy and would even allow us to supplement the local grid.

3. There are a number of building expansions we'd like to do. Inpatient capacity is about 15-20. In terms of patient load, that's been sufficient, but as soon as surgeries

expansion happens, the number of inpatients will rise, and we'll need to expand our inpatient capacity as well as staff housing. The hospital is relatively isolated, so we try to offer as many staff as we can the opportunity to live on campus.

4. Diagnostic imaging and enhanced equipment. In the five-year timeframe, we'd like a CT scanner, but that will be challenging in terms of energy and supply chain capacity.

5. With opening of the surgical room, we'll need anesthesiologists. We'd also like to have critical care.

6. Blood banking is important for any hospital with surgical capacity so we'll need to develop that in next 1-2 years.

7. Transportation for patients. We have one ambulance but we often have patients who need transportation while the ambulance is out with another patient.

In terms of community-based care, our priorities are:

1. Community health worker program. We're working with the government to bolster their program. It's historically been ineffective and we're working with local authorities to retrain and offer some additional support to get it up and running. In the future, we hope expand the program 20-30 fold.

Increasing the number of workers increases the distance they are from the hospital, and in our region, we'll shortly come to the point where CHWs are operating more than a day's walk from the hospital, so we'll have to develop a hub-and-spoke operational model where hospital will be the hub, and we won't be able to expect CHWs to come to the hospital on a regular basis. We're investigating a health post set up in the region.

2. We're looking into the possibility of working with the government to bolster their health posts in the region to give basic triage, medication, and a referral system.

In 3-5 years, we want CHWs throughout Achham and perhaps the other 2 districts within our catchment area. And that catchment area is probably in the realm of 500,000-750,000 people.

GiveWell: Sounds like you have both financial and non-financial barriers to expansion. How much money could you use in the next year before encountering non-financial barriers to further expansion?

Nyaya: This is something we think a whole lot about. We had this discussion at our end of the year (2010) meeting. Our fundraising goal for 2011 is $350,000 and I think we could take $500,000-600,000. In the next 1-2 years we're looking at capital

expansion.

A lot of the non-financial barriers to expansion are in community-based care, not hospital-based care. The big barriers in hospital-based care to expansion are more financial.

After 1-2 years of $500,000-$600,000 fundraising, we probably would go back down and not need that level of funding again immediately. We're probably looking at roughly $800,000-$1 million for capacity expansion that we could take in quickly.

One question is whether we're going to work more broadly in the region to improve health facilities and what responsibility we'll take on for those. We'll learn more about this over time.

GiveWell: How would things be different if you raised $500,000 instead of $350,000?

Nyaya: $350,000 is based on increased operating expenses, surgical capacity, and a small-scale solar project. With more money, we could maybe do the solar project more quickly, invest in surgical capacity more quickly and renovate more buildings. The hospital complex was built 35 years ago by the government but never opened. Each building we opened, we had to put money into renovating the building before we could start using it. There are still 6 buildings that need to be renovated for staff housing and more inpatient beds.

The surgical expansion budget would be over a 2-year time frame.

GiveWell: Were there any documents from your board discussion on this topic that you could share?

Nyaya: Yes. In terms of different budgeting scenarios, we don't have a document for that. I could send you what we did prepare for the board meeting.

GiveWell: Is it easy to find surgeons?

Nyaya: It's not easy. Through our partnership with the government, we'll be able to obtain a surgeon eventually. So, for us, the issue is raising the capital to build the facility. The timeline is 4-6 months to build, and we'll be able to work with the government to identify a surgeon in that time period.

There's a subsidized government-training program for surgeons where anyone who enters the program commits to three years at a government facility. We're eligible to get one once we have the capacity. If we didn't have government affiliation, we'd have more difficulty.

GiveWell: What are your thoughts on the possibility that you would be simply

reallocating surgical capacity from one area to another?

Nyaya: It's a difficult dynamic. Ideally, we'd be increasing total capacity, but it's hard to say what would happen. The reality of the situation in Nepal is that there is an overabundance of doctors, but not in the rural areas.

For one, there's brain drain—doctors emigrate to the developed world. The other thing that happens is that those who can find jobs stay in urban areas. In Katmandu, there's no shortage of healthcare and there are plenty of doctors and surgeons. Convincing those doctors to come to rural areas – where there aren't good schools for their children, for example – is difficult. The hope is that by developing more infrastructure capacity in rural areas, we shift surgeons from urban areas to rural ones.

We're not training surgeons, but the hope is that we'd be able to work with the government to move a surgeon who's stationed at an urban facility out to a rural facility. There aren't many surgical facilities in rural areas.

GiveWell: How did you decide on solar energy?

Nyaya: We're working with a couple of different groups to figure this out. We're working with a group in the US, the foundation arm of a solar infrastructure company. They've been providing pro bono consulting on solar side of things.

We've also been working with the equivalent of the army corps of engineers of Nepal. They made three site visits to our area in Nepal, and gave us a couple of options. The grid where we are is run off a micro-hydro plant that it's only running at 50-60%.

The vast majority of power in Nepal is hydropower. We could try and build another hydro plant but the issues involved with that would exceed the amount of money we'd spend on a solar facility. There's a pretty big distance between water source and where we are. The engineers recommended against this.

We also looked into wind and were told that the wind capacity where we're located isn't sufficient and the only alternative would be to build a wind facility several miles away, which that would require developing infrastructure in between.

The last option is what we're doing right now, a battery system charging off the grid. We spent a lot of time to thinking about whether it made sense to expand upon this grid, and essentially we were told that the infrastructure of the grid wasn't worth investing more money in, so they cautioned us against that.

The other benefit to solar is that there's a part of the government that has a budget to subsidize green technology and one priority is solar, so if we go with solar, we get a subsidy to finance it.

GiveWell: Where to you expect to receive funding from?

Nyaya: I should clarify that we don't expect to raise $1 million in the next 2 yrs. We don't think realistically we will and we're not banking on it.

The difference between previously and now is that we just hired our first full-time person in the US, and about 60% of his time will be fundraising. His background is in Nepali NGO development, and we're hopeful that he'll be able to help us bolster our fundraising capacity.

Our 2010 budget was 30% from Ministry of Health, and we're quite hopeful that that will be bumped up in 2011 and 2012.

We now have more partnerships in the region. The solar subsidy is one of them.

GiveWell: What is the structure of the organization?

Nyaya: The administrative capacity of day-to-day operations is exclusively handled by the Nepali team. 80-90% of the staff is from the local region. The other U.S. volunteers and I have no hand in that.

GiveWell: What is your value added?

Nyaya: We're trying to help public sector to bolster services. Our value added is:

1. We can raise money they don't have access to
2. Through our personal networks (we're mostly at Harvard, Yale, Brown, and UCSF), we have been able to leverage technical expertise.

The area we work in is the poorest area of Nepal was the epicenter of the civil war. It is where the rebel Maoists had their base. The government systematically destroyed everything over 10 years of fighting the rebels. So, the other value added is bringing attention to an area that has been neglected for the last 20-30 years. That's more of a long-term impact.

One thing we've been able to do is to bring representatives from UNICEF and the European Commission out here. On a national policy level, we have seen increased attention from the government on this region (definitely not all our doing but a growing positive trend). Our hope is that through our work in the region, we can bring more resources to the region.

GiveWell: What was there before in terms of health care?

Nyaya: We saw our first patients in 2008. Prior to that, there were half a dozen health posts and one "district hospital." It's about a 6-7 hour hike from where we

are (there are no roads). The health posts were often empty and when there was a heath worker there he or she was very poorly equipped. A lot of health workers have limited training.

In 2008, there were no doctors in the entire district. Now we have two working for us and the government has 1.5 stationed at the district hospital. (One person has time split between that hospital and another one.)

GiveWell: Is there any documentation on the previous conditions?

Nyaya: The rapid health assessments would have that information. I don't know if we have a copy of the Department of Health report from 2007, but we could look into it.