

Harnessing Technology to Strengthen Accountability

A Collection of Unique Perspectives



In Bangladesh, a patient arrives at a public hospital expecting care, but discovers that, again, his doctor did not arrive for work. On the wall, a stark sign prompts patients to send a text message describing any problem that they are experiencing with hospital service. The patient sends a short message to awaiting Ministry of Health officials, who respond in real time, calling the hospital to identify a solution.

Sometimes referred to as the “democratization” of health, examples like this one—in which patients are empowered to have a voice in their care—are part of an influential trend of programs that are incorporating accountability mechanisms to ensure that providers deliver services efficiently and effectively. The programs are managed on two premises—first, that patients have a right to influence their own care, and, second, that providers have a responsibility to identify and respond to challenges like program waste, gaps in care, and funding. In many programs, it is technology that is giving patients a voice and providers the necessary tools to respond to them.

The relationship between accountability programs and technology was addressed in a workshop at the 2012 Pacific Health Summit on “Affordability and Technologies for Health.” Leaders from the public, private, and nonprofit sectors shared four case study examples of accountability programs, and then the conversation opened up to examine the growing use of technology in the health sector to promote and give substance to these activities.

Key questions included:

- How is the “democratization” of health, through the widespread use of technologies such as mobile phones and the internet, affecting individuals’ ability to take control of their health?
- Can patient empowerment increase the accountability of medical providers and policymakers, improve the quality of services, and inform the decision making and investment process?
- What practical considerations are necessary when undertaking technology-based healthcare interventions? Are we embedding technology in programs in ways that are conducive to the systems and the people who use it?

This report highlights excerpts from the discussion on these topics that took place at the 2012 Summit.

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Accountability Programs across Sectors

CASE STUDY EXAMPLES

Location: Bangladesh

Platforms: SMS, Teleconferencing

With 800 public hospitals, ensuring patient satisfaction in one of the world's most densely populated countries is a challenge, but a team at the Ministry of Health in Bangladesh has designed a text messaging program that gives patients a voice. "We placed sign boards in all our hospitals that describe how to send complaints or suggestions for improving healthcare services via SMS," said Abul Kalam Azad, Director of Management Information Systems for the Ministry of Health and Family Welfare.

The messages, which total around 1,000 received per day, aggregate in a web portal monitored by Ministry of Health staff. The complaints, said Azad, range from absent hospital employees and poor patient-doctor/nurse interaction, to out-of-stock medicines and unsanitary restroom conditions. A dedicated team follows up with a phone call to the SMS senders to better assess the situation, and then contacts local authorities who can facilitate immediate solutions.

A separate monitoring component of the program is also alleviating the once common problem of absent doctors. The remote, difficult-to-monitor environments of rural Bangladesh created conditions in which doctors could frequently miss work without detection. "Doctors were taking a salary every month, but not [actually] working there," explained Azad. The government responded by setting up a monitoring system that vets physician attendance at 100 of Bangladesh's 800 public hospitals each day. At random, hospitals are asked to join a Skype videoconference call in which doctors must stand in front of the camera to demonstrate their physical presence. Unexcused absences are reported to the Ministry, which then takes action. Azad noted that these measures have improved the office attendance of doctors by 80-90 percent. "The patients are now seeing more doctors, and have more time with each of them. They have much higher levels of satisfaction with the service they are receiving."

Location: Namibia

Platforms: Patient Charters, Radio, Print Media

In Namibia, the Ministry of Health's multi-faceted approach to accountability focuses on reducing health system costs, improving service, and empowering individuals with information to make health and healthcare decisions. A patient charter, given to all patients in hospitals and clinics, is an educational tool invented to empower patients to be accountable for their own health. "It explains their rights and the various ways that they can act to care for themselves in their own communities," says Paulina Nghipandulwa, Director of Tertiary Health Care and Clinical Support Services at Namibia's Ministry of Health and Social Services. She noted that the charter also has the bonus effect of reducing healthcare costs by cutting down on the need to make tertiary referrals.

Other government efforts to empower patients include call-in radio programs and cellphone based suggestion boxes, but Nghipandulwa explained that some of the most effective feedback has actually come from print media. "In most newspapers, we have a column where patients can put short messages that relay problems, and how they want them to be addressed, to the government. These are picked up by the managers, and often the Minister of Health actually goes to parliament, or the cabinet, to discuss the issues." Given the relevant data and information, the health minister can knowledgeably advocate for resources, and also allocate them accordingly, said Nghipandulwa.



Location: Kenya**Platforms: Mobile Phones, Social Media**

“Mobile technology is doing two things: aiding in service delivery and facilitating better accountability.” For Robert Collymore, CEO of Safaricom, these two capabilities are driving innovative ways of doing good and doing good business. At 20 Kenyan shillings (about US\$0.24) per minute, Safaricom’s Daktari 1525 program connects customers, many of whom do not have access to hospital services due to cost or location, directly with on-call, trained doctors who offer medical advice.

With the same mobile phone, Safaricom’s customers can take service concerns openly to the company via Twitter. “I have my customers hold me accountable and they do so publicly,” said Collymore. “Putting our customer care on social media was a bit risky, because unlike when you simply make a phone call, everyone else can see the problem that the customer is facing.” With nearly 70,000 followers, the Twitter initiative has given consumers the ability to make their problems heard, but the program has also had a net effect on Safaricom’s operational acuity. “The service that we’re delivering has improved tremendously, because it’s open,” said Collymore. “Everyone can see if the network is not working; it forces us to deal with [the problem]. We were courageous, and it has helped us.”

Location: India**Platforms: Human Resources, Telemedicine**

World Health Partners (WHP) has created a multi-tiered health system that bridges the spatial and resource divides between rural and urban areas. The system links independent, village-level health centers to pharmacy outlets, higher-level clinics, and telemedicine hubs that connect to doctors residing in major cities like New Delhi, London, and Mumbai. If a patient’s illness demands care greater than what the rural health center can offer, incentives are in place to ensure that rural practitioners refer them to these WHP-approved entities.

Monitoring quality care in this complicated system requires accountability at several levels. “The communities we serve are very poor, and are not used to the kind of services that are available in the rest of the world,” said Gopi Gopalakrishnan, President & Founder of WHP. Dedicated officials interact with patients in person, educating them about the quality of care that they should expect at rural health centers. They also distribute satisfaction surveys to gauge the quality of service being provided. “We deliberately built an antagonistic system between our organization and the providers,” explained Gopalakrishnan. “The management pressure on the providers comes from the community itself.” This strategy rebalances the relationship between patients and providers, placing more power in the patient’s hands. As informed clients they can demand better service, and, if obstructed, they possess the knowledge and acumen to move their business elsewhere.

At the telemedicine level of the health system, a technology component ensures accountability of the doctor-patient relationship. Each tele-consultation is recorded, and the interactions, as well as prescriptions issued, are subject to audit by a panel of international doctors who review the footage remotely from all over the world. It’s another kind of accountability, this time ensuring that incentives for referrals and prescriptions remain faithful to their intent.

THE CASE FOR ACCOUNTABILITY

Q Why is accountability a critical component for success when designing health programs?

Mutual benefits for patients and providers

JACOBO QUINTANILLA: The word accountability scares us sometimes. When we look at accountability, we look at transparency, we look at monitoring and evaluation, we look at participation, and we look at complaint mechanisms. People do have the right to complain, and that is something we forget in many occasions.

On the other hand, there's also the powerful thought that being accountable to customers helps providers better understand what their patients want and what they need—and therefore [this process] also helps to reduce costs and provide a better service.

Feedback mechanisms facilitate new outcomes

PAULINA NGHIPANDULWA: The government has realized that the voice of the people counts. We are mindful that all the information that we get from our patients documents the quality of our care services, or lack thereof. We depend on this information to identify the issues and gaps in care, and from it, we are able to make collective decisions. As a result of this feedback and the increased knowledge that derives from it, the

Health Ministry is more aware of specific needs. Now the government is increasing the resources devoted to the healthcare system; this is a real change. In this financial year alone, the health system has received a much higher allotment of funding.

ABUL KALAM AZAD: In Bangladesh, the government is enjoying the outcomes that have resulted from using information and communications technology (ICT) to increase accountability in the health sector. In fact, the government has increased the budget for ICT by a factor of 12.

In one instance, the government decided that it would place biometric fingerprint machines in all the sub-district and district hospitals to help monitor staff attendance. There will be approximately one machine for every 200 staff members. One machine costs about \$300, and a new doctor receives roughly a \$300 per month salary. If one machine ensures that one doctor will be in the office for one month, the cost of the machine recoups itself. But actually, the machine checks the attendance of 200 staff—this is value, this is the outcome.

Accountability systems can track impact on communities

STEFAN GERMANN: World Vision is working on an approach called Citizen Voice and Action. We are developing a methodology that helps communities become aware of their health-related entitlements. The project allows communities to begin to measure health service, which creates local-level feedback loops that target performance and service, and address bottlenecks.

We are now moving this project onto a technology platform that will help track the true impact of health interventions. Under the UN Secretary-General's global strategy on women

“We are mindful that all of the information that we get from our patients documents the quality of our care services, or the lack thereof.”

- Paulina Nghipandulwa



An accountability signboard found in public hospitals in Bangladesh.



Translation of signboard:

Govt. Logo
Government of the People's Republic of Bangladesh
Ministry of Health & Family Welfare

You can take medical advice from doctors of this hospital free of charge.

Any day any time. Please make your talk short to enable others to get a chance.
Call this Mobile No. 017130324427

You can directly SMS the Ministry of Health your complaints or suggestions about service quality of this hospital.

To send SMS, please type in message option of your mobile phone:
cmp<space>dasmina<space>your_complaint_Suggestion
Example: cmp dasmina toilet not clean

Mobile No. to send SMS: 017133077774

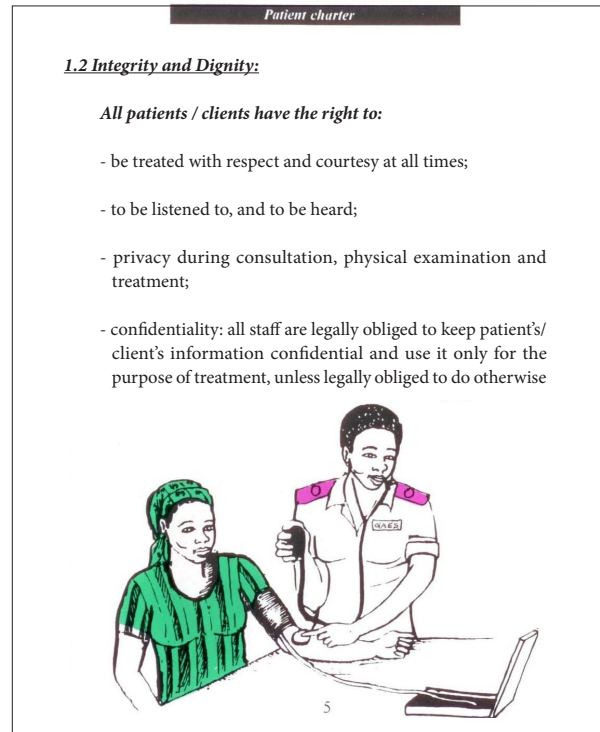
and children's health, for instance, governments have committed to undertake certain interventions.¹ Using a database to track, measure, and report, local communities will be able define what the visible indicators of change are in and around their communities when government delivers.

Connecting accountability with clinical outcomes

JAMES ALLEN: I'm aware of a *Journal of the American Medical Association* report that looks at hospitalized patients in the United States. In this particular study, the evidence showed that those with the highest satisfaction with their care incurred the highest costs and experienced the highest mortality. This, granted, is a very different context. But the example raises the question: are we finding ways to measure and ascertain how patient satisfaction programs are interacting with clinical outcomes? Satisfaction alone can be a misleading metric.

¹ A list of committed countries can be found at <http://www.everywomaneverychild.org/commitments/governments>

In Namibia, a section of the patient charter informs patients about the service that they can expect during visits to hospitals and clinics. The information empowers patients with the knowledge to manage their own health and healthcare.



“Are we finding ways to measure and ascertain how patient satisfaction programs are interacting with clinical outcomes? Satisfaction alone can be a misleading metric.”

- James Allen

Within the WHP System, remote counselors empower clients with quality benchmarks that enable them to demand better service from rural providers.



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ENSURING SUCCESS

Q What methods are used to verify whether accountability programs meet goals and patient needs? Is verification an inherent part of the model for private or for-profit programs?

GOPI GOPALAKRISHNAN: We work with very specific performance indicators that are tracked weekly and reviewed monthly for a snapshot of program performance at senior levels of management, and a more comprehensive analysis closer to the ground. Four key performance indicators are closely tracked: provider product sales and availability, provider delivery of priority services, consultations given by rural providers, and client satisfaction.²

² **Provider product sales and availability:** Each rural provider is assigned performance parameters with specific focus on products related to priority components (TB, diarrhea, pneumonia, leishmaniasis, and family planning).

Provider delivery of priority services: Each rural provider is assigned parameters calculated on the basis of population covered and incidence of diseases for treatment and referral.

In our case, another method of verifying whether the service meets expectations is through expenditure. All of our services are charged at a price that is significant enough for people to use them only if they want to.

ROBERT COLLYMORE: We have three sets of numbers we can look at: one is about 3,000 members of Safaricom staff; the other is 750,000 shareholders; and the third is 19 million customers. If we don't do what shareholders and customers want, second by second, whether by selling shares or moving to the next provider, they will make a decision to leave us. If you don't listen, you'll die.

Consultations by rural providers: An ongoing assessment of cellphone and internet consultations that rural providers conduct indicates interest in remaining with the network.

Client satisfaction: Drawing a statistically rigorous and randomized sample from the medical consultations, clients are visited at home and also called on their cellphones to assess their satisfaction with service quality.

Technology's Evolving Role in Health Programs

A corollary discussion emerged on the growing presence of technology in health interventions. Participants highlighted the tremendous potential of mobile phones and telemedicine projects to deliver health to rural and poor populations, but also noted that the success of such programs is reliant on the extent to which technology is incorporated as part of a more comprehensive health solution.

The following excerpts provide glimpses into the landscape of technology development and implementation, including the state of mobile health (mHealth), considerations to undertake when developing projects, and the need to ensure that technology works in concert with the systems and human beings that use it.

Q • A wireless injection: Are mobile phones changing the game for health?

The primary roles of mHealth

ABUL KALAM AZAD: The purpose of mHealth is to improve health system efficiency, monitoring, and accountability; bridge the rural and urban divide; and deliver services to citizens through the use of ICT.

The mobile phone platform: advantages and limitations

GOPI GOPALAKRISHNAN: The pervasiveness of cellphones in India, as well as in Africa, can be put to good use. Since cellphone coverage is near universal, it has the potential to help deliver care to even remote populations. WHP is evolving its telemedicine program to be able to work through cellphones by October 2012.

Among the many benefits of mobile phones, however, we must also keep in mind their limitations. While doctors can receive

parameters such as blood pressure and heart or lung sounds, video is not available, and unlike in our organization's Internet-based system, there is also a short time lag.

Doing well by doing good, the challenge of partnerships

ROBERT COLLYMORE: Given the resource constraints we have in Kenya, it seemed to us, as a mobile phone company, that we had a technology that could deliver some very simple solutions. From birth to death, millions of Kenyans would never see or speak to a doctor. Daktari 1525 gives them the opportunity to do that. And, it actually works on a commercial level, not a philanthropic one. By linking together either end of the technology, you can create a remote health presence that allows a person in a rural area to be diagnosed by someone who's living in Bangalore or Dubai or London, or any place else. It is aiding in the delivery of service.

Many of the other solutions that we as a network operator are looking at center on SMS, which has been around for decades but simply isn't being utilized well enough. Where we truly need the innovation is in partnerships, and the biggest frustration I have is trying to get these partnerships to work. The private sector, the medical profession, NGOs, and government authorities: they are speaking very different languages. It's the biggest challenge we have; we have to pull together.

Many programs, not much evidence

YOT TEERAWATTANANON: I work for HITAP, a government agency that provides evidence to support a national committee that is developing a health benefits package in Thailand. From a government perspective, we are interested in adopting telemedicine using mobile phones as a part of the benefit package. In fact, we have received notice from many companies and health professionals who want us to include mobile technology in health care. But surprisingly, when we reviewed the evidence we found that around the world there were fewer

“Data doesn’t necessarily get converted into information.” -

Maeve Magner



than twenty strong studies assessing the clinical effectiveness of the mobile phone on health, and most of them focus on only two areas: smoking cessation and diabetes treatment.

The current lack of evidence makes it impossible to spend public money on uncertain technologies even though it sounds promising. There is a tremendous need to do more to evaluate the clinical effectiveness of mobile phones.

Q. What issues do we need to keep in mind when developing health interventions that rely on technology?

Patient privacy

BARRY KISTNASAMY: In healthcare, access is important, but privacy is an important counterbalance. It’s important to ask how that is being protected. If a tele-consultation is occurring between a provider and a patient, is somebody listening in on the conversation, is somebody hacking in? How are we protecting the relationship between the provider and the care seeker?

Adequate infrastructure

ABUL KALAM AZAD: There are about 150 million people in Bangladesh, so you can imagine the power of technology. There are many things that the Health Ministry is capable of doing, but at times, even when we know of valuable technological interventions, Internet bandwidth and the price of Internet bandwidth can be major impediments to practical implementation. These are hard realities in Bangladesh, and resource constraints, conflicting health priorities, and acute shortages of esteemed ICT professionals can also be barriers.

The need for data sharing and analysis

MAEVE MAGNER: Over the last couple of years there has been an increase in the adoption of ICT solutions in health spaces, and for me that means access to more data – but the data doesn’t necessarily get converted into information.

WILLIAM CASTELL: There is a need to start to share time-series data between nations. The quickest way to learn is to look at performance data nation versus nation. It allows you to ask: what are we doing so badly and they’re doing so well? This type of comparison could help us further progress in the acceleration of relevant data and relevant service systems.

GOPI GOPALAKRISHNAN: We must realize that there is a hunger for data. A lot of program data for an organization like ours is very difficult to process on an ongoing basis, because we want to see the larger patterns, which we as an organization are not really tailored to do; we are a service-delivery, implementing agency. But by collaborating with organizations or universities, we are able to get this analysis done faster, more affordably, and with better effect.

Q. Is technology alone enough?

Taking a byte out of the conversation

JACOBO QUINTANILLA: Technology is only one part. Some people say technology is not even 10% of the solution; it is how technology is used and combined with human resources that really counts.

2012 Pacific Health Summit workshop panelists: Robert Collymore, Jacobo Quintanilla, Gopi Gopalakrishnan, Paulina Nghipandulwa. Not pictured: Abul Kalam Azad (left to right)



The irreplaceable importance of communication

SEBASTIEN COISNE: The question arises as to who are the best mediators to actually introduce and discuss technology and the issues surrounding it today. Doctors are a large part of the discussion, but do pharmacists have a role to play in interacting with the patient? In concert with mobile solutions, it's the human face behind the technology that can help the patient to foster their understanding of health and how they can take it into their own hands.

The human factor

GOPI GOPALAKRISHNAN: One humbling piece of information for me is that when the Apollo 11 spaceship was sent up, there was a computer onboard that had a 2-KB memory and 32-KB processing part, but guiding it was a 100-GB device called a human being, in the form of Neil Armstrong.

While the technology is important, WHP prefers it to be simple to ensure that it resonates with the 100-GB talent that we have in every village. At the rural level, the private sector is made up of informal providers who have not gone through any formal training or education. But they have fantastic social skills: they have a relationship with the community; they live in that community.

The question becomes, how do you use technology to enhance their skills? This can happen through technology or business relationships, but often it's a combination of both. Technology is a driver, but only to the extent that the technology can be embedded in the environment where the program is implemented. The purpose of technology is to leverage the human skills that are available. *~*

Contributors



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Previously, he worked for Amnesty International, and ActionAid, where he was Head of Communications in Sri Lanka after the 2004 tsunami.



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