

## How mobile tech is improving healthcare for some of the world's most remote communities

Paid for by

**skoll**  
FOUNDATION

From app-based diagnosis to mentorship programmes, social entrepreneurs at this year's Skoll World Forum shared their thoughts on how tech and collaboration could solve global healthcare challenges

Sue George



Health conditions and illnesses, particularly those affecting children, often go untreated across the developing world. The [top three killers of children in Africa for instance](#) - malaria, diarrhoea and pneumonia - are rarely the cause of death for people in developed countries. Yet too many people in remote areas still lack access to the same life-saving treatments, and others still have to travel long distances to reach the nearest doctor.

If the targets in the UN's [sustainable development goal three](#) - which aims to ensure healthy lives and promote wellbeing for all ages - are to be met, these gaps in care need to be closed urgently. And part of the answer lies in using mobile technology, which is within reach of more and more people - in Africa, as in the rest of the world.

Aiming to open discussion around global issues such as these, the annual [Skoll World Forum \(SWF\)](#) brings together social entrepreneurs to help shape their work - solving challenges from climate change to human rights. In the session

Leveraging Technology to Close the Distance in Global Health Access, social entrepreneurs working in medical tech and people working directly with local communities discussed some of the ways new technology can be used to improve global healthcare.

Community health workers are often the first point of contact for people seeking health advice in many places around the world. Exactly what the term community health worker (CHW) means varies from place to place, said Caroline Mbindyo, director of technology and innovation at Living Goods, during the session. Living Goods works across Africa and Asia supporting door-to-door health entrepreneurs, who counsel families on basic health practices, alongside selling them health products.

"Health workers have to go through ministry of health training, the duration of which varies from country to country," she said. Although this means CHWs' education levels differ a great deal, the World Health Organisation says that they have "enormous potential" [pdf] in encouraging people to take up health services. And although CHWs, most of whom are female [pdf], cannot replace professional health staff, they occupy a unique role at community level.

The Skoll World Forum 2018: how collaborating across borders is creating social change

[→ Read more](#)

So what is the role of technology in helping to realise the potential of CHWs? Magnus Conteh, who recently joined Last Mile Health to lead a new training academy, was on the panel of same SWF session. With reference to recent research from the World Bank, suggesting that the world's poorest people are often more likely to have access to mobile phones than electricity or safe drinking water, Conteh remarked how the

"ubiquitous nature of mobile technology provides a powerful tool for extending health care to underserved populations at the last mile."

Last Mile Health's CHWs and their supervisors use the mHealth platform, hosted on Android smartphones, to log information on patient interactions and supervision visits in real time. CHWs charge their mHealth devices using a solar panel and external battery pack, and can log data on patient interactions, access reference materials and use diagnostic tools in an offline app.

Living Goods also created an app to capture accurate, real-time data for the people they are diagnosing and treating. As a result, these CHWs can carry out malaria diagnoses and recommended treatment via the app, regardless of training.

"It is not up to the CHW, but the app will say: 'in this instance give medicine; in this instance refer'. This works around the limitations of [differing] training and education levels, providing equal quality for everyone. It also provides a lot of very rich data to national or local governments," Mbindyo said.

Supervisors can track stock levels held by each health worker, and restock as appropriate. With this system, CHWs and supervisors are assured that vital medicines are always in stock.

"In a typical health facility, there is very little data to help to forecast what medications they will need at any given time. They also don't know that if the medication that has run out in facility A is available in nearby facility B - they don't have that data. If when patients go to a facility there are no drugs, this undermines community confidence in the service," she said.

Of course, technology is only as effective as the people who use it.

"[Developers] can create a phenomenal platform, but it's the folks who use that platform ... that's the revelation," said Sally Osberg, president and CEO of the Skoll Foundation. "The tool is in service in the field, and its aim is to help human beings."



▲ Seed Global Health provides training to health professionals in Africa from US volunteers. Photograph: Seed Global Health

Nor is technology the be-all and end-all of improving access to healthcare - education and knowledge-sharing is also key. Dr Vanessa Kerry, a delegate at the SWF, is a co-founder and CEO of [Seed Global Health](#), a not-for-profit organisation that engages US health professionals to serve as educators and faculty in resource-limited countries. Its aim is to help build a pipeline of future providers in those countries in order to save lives. Since 2013, Seed has sent more than 190 volunteers who have helped train more than 13,700 health professionals in Liberia, Malawi, Swaziland, Tanzania and Uganda. Dr Kerry believes that clinical mentorship can provide a bridge between countries and enable people everywhere to be able to "thrive not just survive".

However it is done, and wherever it is done, training is vital to good healthcare. The health workers and health entrepreneurs connected with both Living Goods and Last Mile Health are often government-trained CHWs, but the organisations offer additional training and support.

Last Mile Health is setting up the [Community Health Academy](#) - which was a prize-winning [Ted talk wish](#) for its founder Raj Panjabi in 2017. Conteh, who recently joined to lead the academy, also spoke at this session. The academy's goal is to reinvent the education of community health workers to help ensure everyone has access to medical care. One of the ways it aims to do this is through equipping health workers with smartphones, to enable them to take part in continuous clinical education.

Tech is now being used so extensively across various countries in Africa that Mbindyo said developers and organisations should be thinking about the next step. "There are so many different donors, non-profits, and governments all really starting to see the value of tech, but we need to have greater harmonisation between the tools," she said. "Isn't there a way to build tools that can be reused so not everyone has to build their own?"

---

---

Topics

[Social entrepreneurs solving problems around the world](#)

[advertisement features](#)



back to top



Sign up to our daily email

Email address

Sign up

[make a contribution](#)

[advertise with us](#)

[terms & conditions](#)

[all topics](#)

[subscribe](#)

[work for us](#)

[privacy policy](#)

[all contributors](#)

[securedrop](#)

[contact us](#)

[cookie policy](#)

[facebook](#)

[help](#)

[complaints & corrections](#)

[digital newspaper archive](#)

[twitter](#)

© 2018 Guardian News and Media Limited or its affiliated companies. All rights reserved.