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At a glance: Sierra Leone

The SMS reporting revolution takes on Ebola, in Sierra Leone

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By John James

We [recently met](#)[44] Ebola survivor Alfred Pujeh, one of the dedicated staff who look after vulnerable children while they are under quarantine for Ebola, at Sierra Leone's new Observational Interim Care Centres. He and other workers around the country are also helping to wage one key battle in the fight against Ebola – with their phones.

FREETOWN, Sierra Leone, 9 March 2015 – At the end of the working day, Alfred Pujeh sits down at his wooden office desk, reviews his notes – and pulls out his phone. It's reports time, in this Observational Interim Care Centre (OICC) in Sierra Leone.

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Every evening, Alfred Pujeh pulls out his basic mobile phone and answers SMS text message questions about the Observational Interim Care Centre where he helps care for children under quarantine for Ebola.

Flash messages to Freetown

The newly established facility, run by the government and set up with UNICEF support, looks after children who may have come into contact with the deadly Ebola virus, for a 21-day surveillance period. Every evening, Mr Pujeh pulls out his basic mobile phone and answers SMS text message questions from the Ministry of Social Welfare, Gender and Children's Affairs on how many children are in the centre, on gender and age and on how many children have been discharged during the day.

Within a split second, the results are in Freetown, which is nearly four hours away by car, where the ministry, in turn, compiles his results with similar data from all corners of the country. There is no need for an Internet connection, a sophisticated phone, or even phone credit – just a basic handset with a network connection.

"For traditional reporting, you have to sit down and write and it will not get to the appropriate people easily," says Mr Pujeh. "It will take time to reach the main office.

"[B]ut now, it is very easy."

Armed with open source for a key battle

Getting data quickly has been a key battle in the fight against Ebola, which has caused more than 3,000 confirmed deaths in Sierra Leone since May 2014, according to the National Ebola Response Centre.

That is where the RapidPro free open-source platform comes in, [launched globally](#)[55] by UNICEF in September 2014. It isn't the world's first mobile phone reporting platform, but it is one that's remarkably well adapted to the field – easy to set up and usable on pre-existing equipment and phone networks in all but the remotest places.

"Any sort of tracking, monitoring and data pooling that you can think of can be done with RapidPro," says Shane O'Connor, UNICEF Sierra Leone's Technology for Development officer, who has worked with the programme teams on setting up the customized reporting apps.

RapidPro's cloud-based, multi-language and multi-channel (SMS, voice, Twitter) architecture has allowed UNICEF and its partners to quickly scale systems that can deliver life-saving information and services to those who need them most. Since its launch, more than 20 million messages have been sent to/from beneficiaries in over a dozen countries around the world.

It was first used in Sierra Leone by the UNICEF team behind the Ebola Community Care Centres (CCCs), who set up 46 centres in five districts with 404 beds in less than two months, between November and January. The CCC teams, often located in isolated chieftaincies, needed to communicate information on triage numbers, admissions and results to Freetown on a daily basis so experts could keep abreast of the latest caseload trends. With RapidPro, the CCC team were able to set up the SMS reporting system in just a few days, without the months of design and programming normally needed on a project like this.

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Using RapidPro on their mobile phones, social mobilizers like Mohamed Conteh (above) can quickly report on outreach activities, as well as on adverse social and behavioural practices like secret burials and body exhuming.

Broader applications

Since then, just within the Sierra Leone office, the platform has been used for daily and weekly OICC monitoring, reporting from the district protection desks, following up on Family Tracking and Reunification and daily and weekly monitoring by the social mobilization team. It also forms the backbone to the newly launched [U-Report polling network](#)[66].

"We are using a network of 788 monitors across the country using the RapidPro platform for real-time and independent monitoring of social mobilization activities," said Kshitij Joshi, head of Communication for Development at UNICEF Sierra Leone. As well as reporting on activities organized by the national Ebola social mobilization pillar, which is co-led by UNICEF and which brings together all actors in the sector, field monitors can also report on adverse social and behavioural practices like secret burials and body exhuming.

Thanks to the successes so far, there's now interest from the UNICEF Education team to monitor the expected reopening of schools, as well as plans for nutrition supply monitoring and reporting on HIV treatment. It can take as little as half a day to build a new app.

Mr O'Connor stresses that, like any technology solution, it is not a 'magic bullet' for every situation, and care is still needed to make sure field reporters know how to start using the system, and understand exactly the sort of information that each question is asking for.

But the mix of high-tech and low-tech has made data-sharing and responses far faster than they otherwise would have been, in an Ebola outbreak in which speed has been of the essence.

UNICEF Photography: On Ebola's frontlines

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Ebola in West Africa

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