

Technology helps Nigeria's fight against polio

November 15 2013, by Aminu Abubakar

Mahmud Zubairu scrutinises the computer screen in front of him, watching the progress of healthcare workers as they fan out across Nigeria's northern Kano state where polio runs high.

The dozens of teams are going door-to-door to immunise every child aged under-five, as part of an aggressive push to eradicate the debilitating disease.

But this is a campaign with a difference, as Zubairu, a doctor and coordinator of the vaccination project, can follow the workers remotely in real time thanks to state-of-the-art technology.

"It is now easy to monitor the immunisation coverage of each vaccination team because the phone trackers each team carries along generate tracks which are sent via satellite to our website," the medical doctor told AFP.

"That enables us to compute with a high degree of precision the number of houses the vaccinators have covered each day during a campaign."

Zubairu works out of an office in the city of Kano used by the Bill and Melinda Gates Foundation, which has pledged to help wipe out the disease across the globe.

While the phone-tracking idea is the brainchild of the World Health Organization (WHO), the billionaire Microsoft founder and his wife's charitable foundation are helping to fund the four-year project.

Kano state has been targeted because of its high prevalence of polio and because many parents—suspicious of immunisation programmes—still reject the vaccine, meaning the number of home visits to administer jabs is low.

"The tracking is all in a bid to increase vaccination coverage and ensure good supervision," said Zubairu.

Yellow electronic dots appear on the satellite maps of each of Kano's six target districts every time a vaccination team stays at a location for more than two minutes.

Green horizontal and vertical grid lines divide an area into squares, with each box representing a house.

"If no tracks are found in any box it means that house was not visited, and by that you can compute the number of houses covered and the percentage of coverage without being overwhelmed by the number of valid tracks generated in an area visited by vaccinators," Zubairu explained.

In one section, the screen shows that only half of the houses were visited despite a succession of yellow dots on the Google Maps software.

Nigeria, Pakistan and Afghanistan are the world's last three countries where polio remains endemic and as such are the focus of efforts to eradicate the disease, which has also seen a sharp rise in Somalia and Syria as law and order and infrastructure broke down in both countries.

'On track to eradicating polio'

But efforts have not always been easy. Between 2003 and 2004, Kano state suspended polio immunisation for 13 months following claims by some

Muslim clerics and doctors that the vaccine was laced with substances that could render girls infertile.

They alleged the immunisation programme was part of a US-led Western plot to depopulate Africa. Similar claims have been made by Islamists in Afghanistan and Pakistan.

As a result, Kano became a hotspot for transmission of the virus—which can cause paralysis that may lead to permanent disability and death—within Nigeria and farther afield, alarming health organisations.

Laboratory analysis both in and outside Nigeria confirmed the vaccine was safe but public rejection persisted. One WHO doctor in Kano said this prompted some immunisation officials to falsify data to justify their allowances—a practice the phone tracking will help stamp out.

The inoculation drive is now back on track thanks to renewed awareness and support by local political leaders, traditional Nigerian chiefs and clerics.

Aliko Dangote, a Kano-born business magnate considered Africa's richest man, was also hailed by Gates, on a visit to Nigeria this week, who welcomed his involvement in the project.

Nigeria's President Goodluck Jonathan said that with such powerful figures on board there was "no reason" why polio could not be wiped out in 2014.

Given the high cost of the tracking project, the Gates Foundation concentrated on 40 high-risk areas in eight northern states, including Kano.

But the program has faced hurdles. In February, eight unknown gunmen

in motorised rickshaws opened fire on two polio clinics in Kano, killing nine women vaccinators.

Pakistan, too, has been hit by repeated attacks on similar projects.

The Global Polio Eradication Initiative said this week that Nigeria had 51 of the 328 cases of the disease worldwide in 2013. That compares to 121 out of 223 in the previous 12 months.

Zubairu attributes the drop largely to the use of technology and phone tracking of the volunteers who administer the vaccine.

"Since we started tracking we have seen a systematic increase in polio immunisation coverage and we are right on track to eradicating [polio](#) in Nigeria," he added.

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