Uganda

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Innovations

⊡ Programme

mTrac

Using innovations to improve healthcare

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The situation

Imagine walking into a remote health clinic in rural Uganda, shaking with high fever from malaria, and not knowing if you'll see another day, only to find that thanks to an innovative system – eHMIS (Uganda's electronic health management information system which merges mTrac and DHIS2) – you walk out alive and well, with all the necessary medicines you need in your pocket.

mTrac is part of a growing digital health revolution across much of the developing world, leap-frogging traditional infrastructural challenges to help impoverished communities receive the health care that they deserve.

Rapidly growing mobile phone penetration in Uganda (estimated at 65 per cent in 2015) is providing health providers, as well as the clients they serve, new opportunities to access and use real-time information to improve decentralized management capacity, identify disease outbreaks and service delivery bottlenecks as they occur, and strengthen citizen engagement and mutual accountability for results.

What is mTrac?

mTrac is used by health facility workers to submit routine, weekly health surveillance data by SMS using their own basic mobile phones. It is part of the Ministry of Health's national eHMIS system, which also includes DHIS2, a digital platform for collecting and analysing facility and community health management information system data.

mTrac indicators include notifiable diseases, stock levels for eight tracer medicines, and maternal and neonatal deaths. This data is automatically integrated into DHIS2 for further analysis. When any preset threshold is reached, such as 20 cases of typhoid or a single case of viral haemorrhagic fever, an SMS alert is sent to every member of the

district health management team for immediate response. A clinician can also send an alert to the Ministry of Health and district health team notifying them of any other critical issue.

The eHMIS system now has a massive database of health workers – more than 62,000 – with their mobile phone numbers. This allows local government to communicate with health workers and empower district health teams by providing information and tools for timely response. Additionally, mTrac is used by the Ministry of Health and district officials to conduct rapid polls and surveys covering every single health facility in Uganda at a very low cost, with an average poll costing around US$150.

An anonymous toll-free SMS complaints hotline also allows ordinary Ugandans to report health service delivery problems to health authorities for immediate resolution. The Ministry of Health's help desk reviews and sorts this community-derived data, and forwards them to the appropriate action centre for follow-up.

About 70 to 80 per cent of the messages are forwarded to district health teams, which are given two weeks to resolve and close cases. All reports which are criminal in nature or older than two weeks are automatically escalated to the State House's Health Monitoring Unit (HMU).

With just a cheap, simple phone in my hand, i have seen diarrhoea and malaria cases decrease greatly in this village.

Jessica Nakawesi, a registered mTrac member of a village health team in Bukomansimbi District

Achievements

- Launched in 2011, mTrac reached national scale-up in 2013. It now has more than 62,000 registered health workers from 4,431 health facilities and all district health offices.

- Weekly reporting rates for the mTrac HMIS 033B surveillance form continue to rise, with nearly 80 per cent of health facilities submitting complete reports on time during the second quarter of 2016. A fifth of districts are reporting at 100 per cent levels, and 44 per cent are above 90 per cent.

- The national complaints hotline has received close to 15,000 'actionable' reports since 2012. Districts responded to 70 per cent of cases within two weeks, with the Health Monitoring Unit (HMU) conducting field visits to 1,268 health facilities and closing 93 per cent of remaining cases.

- The Ministry of Health Annual Health Sector Report shows that national client satisfaction has significantly increased since the introduction of mTrac, from 46 per cent in 2009 to 69 per cent in 2015.

- In August 2016, Ugandan President Museveni showed his support for mTrac by personally leading an HMU-organized community dialogue where issues of health worker absenteeism and theft of medicines were highlighted, and Ministry of Health officials held accountable.

Expected results:

- By 2020, further integration of mTrac into the health information system architecture will include expanding the database to 300,000 registered users, including all community health workers.

- Data usage and accountability for results will be strengthened by developing bottleneck analysis tools and action trackers in DHIS2, and supporting the Ministry of Health to revise their district planning guidelines to ensure local government takes a more evidence-based, data-driven approach to planning, monitoring, budgeting and implementing.

Watch this video