

## upSCALE: Strengthening mobile health in Mozambique

### Improving disease surveillance and community-based maternal and child healthcare

#### Background

To reach universal health coverage, the use of community health workers (CHW) to deliver clinical and outreach services to remote communities is common practice in low- and middle-income countries. CHWs provide critical timely assessment, diagnosis and treatment of malaria, pneumonia, malnutrition and diarrhoeal illnesses to some of the hardest-to-reach children.

In Mozambique, CHWs are part of the country's Community Health Workers' Programme — known locally as *Programa Nacional de Agentes Polivalentes Elementares* (PNAPE). They are trained to carry out clinical assessments and health prevention activities in the remote areas in which they reside. Their caseload focuses predominantly on children under five; however, they also support women along the antenatal and post-natal continuum of care, provide family planning support, and advise tuberculosis and HIV patients on treatment adherence.

Since 2016, Malaria Consortium has been the key implementing partner of a scaled digital community health information system called upSCALE, which aims to support improved quality of care provided by CHWs. The project is funded through our partners at UNICEF.

#### Country

Mozambique

#### Donor

UK aid from the UK government (through UNICEF)

#### Length of project

May 2019 – April 2022

#### Partners

Dimagi Inc

Ministry of Health of Mozambique – PNAPE

UNICEF

The upSCALE intervention consists of two applications. The first is a smartphone app that guides CHWs through patient registration and diagnosis and advises on treatment and referrals. The second is a tablet-based app that supervisors can use to schedule and follow up on supervisory visits, and to monitor CHW performance and stock levels of critical commodities. The application was developed on an open-source platform designed specifically for use by frontline health workers by our partners at Dimagi, a company that develops scalable ICT solutions for low-resource settings. Data entered by CHWs through the upSCALE app are visualised through the district health information system (DHIS2), supported by Malaria Consortium at community, district, provincial and national levels.

The app offers the potential to analyse local disease-specific trends in near real-time, allowing managers to improve resource allocation and target interventions. The programme is currently being implemented in seven out of 11 provinces with over 3,500 digitally enabled users of the app to date. The Ministry of Health (MoH) is planning to roll out the platform to all 8,800 CHWs and 1,300 supervisors nationally by the end of 2023. Additionally, a full data integration plan with DHIS2 is ongoing to optimise strategic decision-making. This next phase of the implementation will see a number of activities undertaken to target interventions.

## Activities

Malaria Consortium will provide technical assistance to the MoH to:

- integrate a new, non-communicable disease module outlining a set of digitised clinical MoH guidelines to support CHWs to assess, diagnose, treat and refer patients in the antenatal phase who have suspected diabetes, hypertension and preeclampsia
- strengthen data analysis and visualisation of the community health system to inform a stronger data-to-action and decision-making model at MoH, national and sub-national level with key stakeholders

- develop PNAPE's capacity to use the apps and data generated to improve resource allocation, as well as administratively manage the platform at all levels of the health system
- facilitate monitoring, supervision and quality assurance of activities at district and provincial levels
- continue to foster a sense of ownership of upSCALE by developing clear implementation guidelines and standard operational procedures, supporting budgeting and planning for implementation activities at central and provincial levels, and transferring the platform's administration to the MoH
- gather and disseminate evidence on upSCALE's impact on the quality of services and lessons learnt, to inform further project implementation and help improve other national and international mobile health solutions.

## Learning outcomes

The project aims to determine how:

- a digitised community health information system can facilitate improved quality of service delivery through more accurate diagnosis and, consequently, timely treatment
- upSCALE can strengthen community-level surveillance of disease outbreaks and trends through real-time data capture and data granularity
- geographic information system mapping can support improved targeted resource planning and mobilisation.



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**Cover image:** Community health worker using the upSCALE app, Mozambique

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