

MARCH 2020

upSCALE Newsletter **MOZAMBIQUE**

Ministry of Health, Malaria Consortium and Unicef continue to promote community health through upSCALE

Welcome to our first newsletter on the upSCALE project in Mozambique..



CHW Group in the context of the paper removal survey

Between 2009 and 2016, Malaria Consortium developed and tested an interactive mobile phone application called inSCALE to improve the quality of care provided by Community Health Workers (CHWs)- also known as Elementary Multipurpose Agents (APEs) in Inhambane Province.

Based on the success of the study, the **upSCALE** digital health platform was created in conjunction with the Ministry of Health (MISAU) and Unicef.

upSCALE is a smartphone app that guides CHWs through patient registration, diagnosis and

counselling on treatment and referrals, while a tablet-based application allows supervisors to monitor CHW performance and inventory levels.

Data entered by CHWs through the application is viewed and analysed by the government in the District Health Information System (DHIS2) at the district, provincial and national levels. The application makes it easy to analyse disease-specific local trends almost in real time, enabling managers in Mozambique's health system to improve their resource allocation.

Previous upSCALE partnership and cooperation agreements (PCAs) were focused on different stages of platform development- design and functionality; testing system robustness on expansion to other provinces; and supporting the institutionalisation of the upSCALE platform within MISAU.

From May 2019 to December 2020, a new PCA started. In this PCA, Malaria Consortium provides technical assistance and quality assurance support to the Ministry of Health, which will lead the upSCALE implementation in the provinces.

MC's technical assistance is focused on supporting the national implementation of the platform in **five key areas**:

1. Ensuring the application meets current needs;
2. Training and management of the application;
3. Ensuring regular use of the platform, including maintenance and use of platform-generated data and appropriate actions to improve the quality of CHW services;
4. Institutionalising the platform within MISAU and supporting budgeting and planning activities for the geographic expansion of the platform; and
5. Providing evidence for national expansion.

The objective is to develop the capacity of the National Programme for Community Health Workers (locally most known as *Programa Nacional de Agentes Polivalentes Elementares*- PNAPE) to implement and manage the platform at all levels of the health system, thus ensuring ownership and long-term sustainability.

At the end of this project, Malaria Consortium expects to answer the following **learning questions**:

- How effective the MoH-led upSCALE implementation activities are;
- How upSCALE affects the quality of CHW services;
- Whether the CHW programme can switch to digital reporting only and remove monthly paper reports;
- How to keep device batteries charged in the field more efficiently.

It is also a source of information to support other initiatives aimed at developing and improving coverage of community maternal and child health care and disease surveillance in Mozambique.



Working group for solar panel testing

Research on solar panels and batteries

As reported in the last insight in September 2019 and seen during the previous PCAs of the upSCALE implementation, the application's batteries are energy intensive and the solar chargers have rarely been able to provide more than 65% charge. Mobile phones often run out of battery after four hours of consultation, preventing CHWs from reporting real-time data and using the app as a decision support tool during diagnosis.




Based on this fact, Malaria Consortium, with support from the Ministry of Health, began in October 2019 a survey on solar panels and batteries. It is a prospective small-scale study designed to use mixed methods. Quantitative data is being collected on the charging performance of selected devices daily for one month; and qualitative data will be collected from a questionnaire opened during November.

The study is being conducted in Zavala and Morrumbene districts in Inhambane province. A total of 19 CHWs are part of the sample. Those selected were high-performing CHWs- for example those submitting complete data within the right timeframe, as indicated by the reports sent from CommCare from May to June 2019.

On 29 October, each selected CHW participated in a half-day training with a Malaria Consortium technical officer, who was very important in contextualising the study, training the CHW to operate the devices and explaining the data collection procedures.

For this research, new devices are being tested, and new devices have been selected through analysis using the following criteria: adequate cost, adequate battery capacity, robust cable and USB port for mobile charging. The table below shows the devices to be tested and their specifications:

Table 1: Specifications of the equipment under test in the survey

	Home based chargers		Portable chargers
Brand name	Sun King Home 60 OR 120	Villageboom High Power +	RockA Surge
Description	Home lighting system with phone charging capability, solar panel and three light points	One light point with phone charging capability	Portable charger with four USB charging points. LED torch light. Micro USB input.
Specifications	6W solar panel 6,000 mAh battery Three light modes 24-hour battery life Battery charge indicator display (5 bars) 5 metre cable USB port Drop proof, water and humidity resistant	3.8W solar panel 4400 mAh battery Two light modes Battery charge LED – red when charging, green when fully charged	20800 mAh battery Lithium-ion battery 13-15 hour charging time Battery charge indicator display (5 bars)
Image			

The selected CHWs were divided into three groups: group 1 – with existing solar panel (SunKING PRO) and battery; group 2- testing of the new solar panel (solar accumulator) and battery (powerbank A); and group 3 – testing of the new solar panel (Home 60 / Home 120) and battery (Powerbank B). In the end, Malaria Consortium expects to know the best-performing charging and battery device to be able to improve the work of APEs and to report real-time data and application availability to serve as a diagnostic guide for appointments.

The feasibility of phasing out physical CHW reports

Malaria Consortium is conducting, in partnership with the Ministry of Health, a study on the feasibility assessment of the phasing out of CHW monthly reports in physical format in two upSCALE implementation districts in Mozambique.

In Mozambique, CHWs submit monthly indicators to their Health Facility Supervisors in physical format using Form A. Indicators in Form A present aggregated data from CHW logbooks, including indicators on health promotion, promotion activities, prevention and cases seen. Form A is then aggregated from HF level to national level using different forms, known at each level as Fact Sheets B, C and D.

In July 2017, the upSCALE APE app was created and a reporting module added to automatically aggregate the data entered into the app by compiling the CHWs' indicators for monthly reports. This data is summarised in the app and sent to supervisors every month (see figure 1A). Additionally, the indicators are updated and made available in real time through the upSCALE CommCare server, known as CommCareHQ and which can be exported to Excel or CSV (Figure 1B). The upSCALE CommCareHQ integration with DHIS2, currently under way, will mean that CHW indicators can also be viewed through the DHIS2 dashboard (Figure 1C).

The study aims to assess the acceptability, data quality and cost implications of eliminating CHW registration tools in print in two upSCALE implementation districts in Mozambique. It is specifically intended to audit the data quality of the submitted CHW indicators and to estimate the monthly cost of the paper-based report.

On 19 August 2019, Malaria Consortium, in coordination with Inhambane Provincial Health Directorate (DPSI), refreshed the removal of physical records at the MC Inhambane office, which was attended by four DPSI technicians, two from Jangamo, one Panda and two from Malaria Consortium districts. From 20 to 21 of the same month, the team travelled to Jangamo and Panda districts to train 45 CHWs and 12 supervisors on the removal of physical records.

On 2 September, the research team travelled to the Jangamo District in the health areas of Madonga and Chuchululo, where it was possible to work with three CHWs and take the pre-test as part of the phasing out of physical records. And from 23 October to 15 November, the team audited data quality by comparing registration with CommCare application-based reports and the logbook with 25 APEs, 12 supervisors, two district statistics technicians, and two district coordinators.

To gather the opinions and sensitivities of those working directly with digital and physical reporting, semi-structured interviews on digital report acceptability were conducted for five CHWs, five supervisors, two NEDs, two district coordinators and one provincial. The data quality audit data will then be cross-checked comparing the record with CommCare application-based reports and the logbook, as well as interview data and further analysis after the last data collection phase in December.

For the last month of the pilot, the top ten best performing CHWs in the pilot districts will be invited to eliminate their logbooks in addition to Sheet A. At the end of the month, these CHWs will be interviewed to see if they accept elimination of the registration system, including challenges and opportunities, using the same methods as described above.

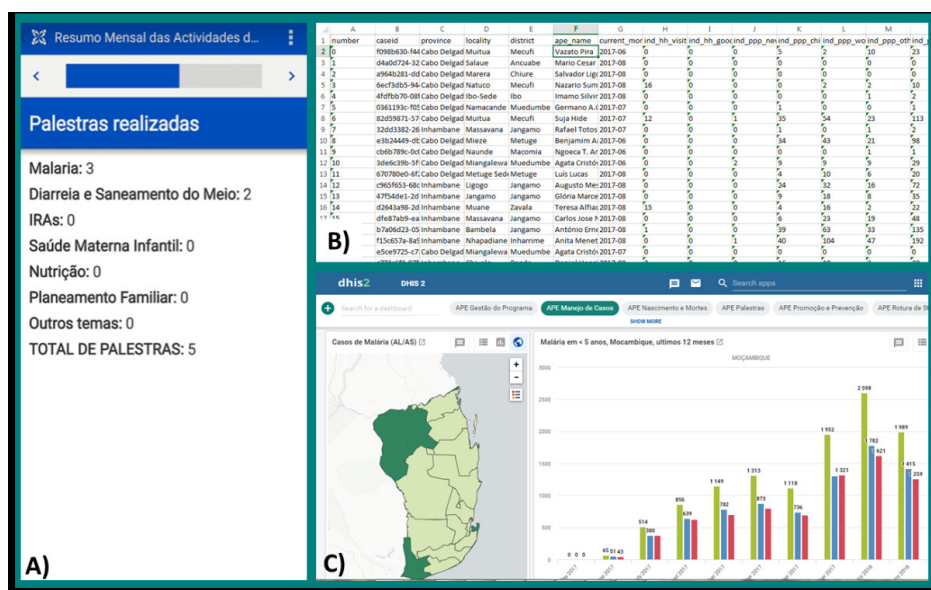


Figure 1: upSCALE Monthly Indicator Data can be accessed through A) EPA Monthly Reporting Module and Supervisor Applications, B) Exported to CommCareHQ, and C) DHIS2 Dashboard

Success story

My name is Aliança Julião Guambe, I am from Inharrime district. Before embracing the cause of Community Health Workers, I was a coconut merchant. I used to sell in Maputo. As I wanted to participate in some way in the development of my community and help those who really need it, I decided to become a CHW. In June 2018 I took part in training to be a CHW. I started my activities in January 2019.

One of my main activities has been health promotion at community level, sometimes through home visits. It has not been easy. Sometimes I find some bad families, they insult me, but I don't give up until I reach my goal. But there are also many very receptive and curious families looking to learn more about diseases such as pneumonia, malaria and fever. These cases make me very happy because one of our goals is to have an informed community.

One of the biggest challenges in my work is upSCALE CommCare mobile phone charging. I can't charge it through the powerbank because I don't have electricity in my house. I worried about continuing to send data, communicating with service colleagues and my supervisor. So, despite spending many months without receiving subsidies, I chose to use my own money to charge the mobile phone with a neighbour. I have paid 10 meticals for each charge of the cell phone battery that sometimes does not reach 100%; but it's worth it.

When I use my own money to charge my CommCare phone battery to access upSCALE, I don't feel like I am losing my money because **I know I'm doing something good to continue helping people**. With the cell phone working, I have a script in consultations, but without it I would have difficulty making consultations.

I know a lot of fellow APEs have the same difficulty, I think they should not just shut up and do nothing, they should look for a way to overcome the cell phone battery charge problem so they can keep working because the community has so much expectation.

Aliança Julião Guambe thanked the Government for the opportunity to be part of the CHW program and help her community and asked them to try to be more timely in providing monthly allowance as it helps to encourage CHWs to work harder and better.



Julião Guambe Alliance, Inharrime District CHW, Inhambane Province



Constantino with João Vicente



João Vicente Maculuve is a community member helping the CHW carry medicines

United community: stronger together

Constantino Paulo Guambe is the CHW in Mavela, Coguno Health Area, Nhapadiane locality. Mavela is a community of 1,000 people, made up of about 140 families. Constantino serves an average of about 10 patients per day.

Like others CHWs, Constantino's main activity is health promotion and disease prevention. He has been campaigning at community meetings and at home level.



One of the biggest challenges Constantino has faced since 2012 is the long distance from his locality to the referral health centre to collect medicines. He has to walk about 20km. He started to walk alone but, in 2013, when he grew tired of walking, he exposed the problem of transportation in a community meeting.

The community and community leaders heard the call for help, and no one said anything. There was silence. Then, when least expected, there was a deep voice saying: "I can help." Everyone looked around to find out who had spoken. It was João Vicente Maculuve.

João Vicente Maculuve is a 60-year-old community member and farmer with 10 children. He voluntarily applied to carry the CHW Medication Kit every month from the health facility to that community using his oxen traction vehicle.

Seeing the help of Mr Maculuve and his family in the timely transport of the Medication Kit, the community leaders (including Roberto Twalufo) exempted him from other community activities such as sanitation, leaving him with the responsibility to carry the kit whenever necessary.

João Vicente Maculuve is calling on the Ministry of Health to make timely provision of medicines to distant communities like Coguno.

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