



**malaria
consortium**

disease control, better health

Rapid support of the COVID-19 response at community level in Mozambique through adapting the existing upSCALE digital health platform and telemedicine

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Background

- The current COVID-19 pandemic has been detected in many malaria-endemic countries such as Mozambique.
- A rapid response model will be key to effectively supporting COVID-19 management at community level.
- Community health workers in Mozambique are locally known as agentes polivalentes elementares (APEs).
- upSCALE was launched in 2016
 - smartphone app supports APEs with patient registration, assists diagnoses and provides treatment advice
 - tablet-based app allows supervisors to monitor APEs' performance and stock levels.
- Implemented in three provinces (Cabo Delgado, Inhambane and Zambezia) with 1,199 APEs and 342 supervisors. To date it has registered almost 200,000 patients.
- upSCALE will be rolled out to 8,800 APES nationally by 2021.



COVID-19 in Mozambique

- Cases: 16,133
- Deaths: 133
- Recovered: 14,416
- The majority of active cases are in Maputo City (74% of the total number of active cases in Mozambique).
- On 29th October 2020, President Nyusi outlined further easing of restrictions introduced to prevent the spread of COVID-19 including:
 - resumption of 7th grade on the 2nd November
 - resumption of national championships without spectators
 - resumption of tourist visas being issued.



Knowledge, attitudes and practices survey

The image displays the KAP (Knowledge, Attitudes, and Practices) survey design tool interface, showing a question configuration screen and a mobile device preview.

Left Panel (Navigation):

- Introduction
 - Malaria Consortium, in collaboration with t
 - Do you agree to take part and participate in...
 - + Add Choice
 - Yes
 - No
 - As you have not agreed to participate, you
 - Sources of knowledge about Covid-19
 - Where did you hear or see the messages a...
 - + Add Choice
 - Newspapers
 - Word of mouth (e.g. friends, family)
 - Social media

Right Panel (Question Configuration):

Introduction

Question List

Display Text (Portuguese): Introdução

Display Text (English): Introduction

Question ID: introduction

Logic: ?

Display Condition: [Field]

Advanced: ?

Data Parent: Drag question here

Appearance Attribute: field-list

Comment: [Field]

Mobile Device Preview:

Working as teste.ape1. Use e.zandamela@malariaconsortium.org.

KAP

Where did you hear or see the messages about COVID-19?
Select all that apply

- Newspapers
- Word of mouth (e.g. friends, family)
- Social media
- Local television
- Local radio
- Through upSCALE
- Health facility

Results: respondents' characteristics

Characteristics		Number (n=297)	Percentage (%)
Gender	Male	226	76
	Female	71	24
Age (years)	18–29	83	28
	30–49	97	33
	50+	117	39
Province	Cabo Delgado	143	48
	Inhambane	33	11
	Zambezia	121	41
Years as an APE	0–2	74	25
	3–5	109	37
	5+	114	38

Results: respondents' sources of COVID-19 knowledge

Question	Option	Proportion selected (%)
Where do you hear or see the messages about COVID-19? (select all that apply)	Newspapers	9
	Word-of-mouth	13
	Government website	2
	Local television	5
	Local radio	27
	Through upSCALE	15
	Health facility	26
	Other (please specify)	1
	I have not heard any messages	1

Results: symptoms and at risk groups

Question	Options	Proportion selected (%)
What are the three main clinical symptoms of COVID-19? (Select three)	Fever	90
	Headache	98
	Shortness of breath	87
	Dry, persistent cough	90
	Conjunctivitis	45
	Fatigue	50
	Diarrhoea	55
	Loss of speech or movement	10
Correct answer	All three correctly selected	25
Which of the below are at risk groups for COVID-19? (Select all that apply)	Elderly individuals (aged >70 years)	97
	Pregnant women	3
	Those with chronic illnesses (e.g. heart disease, diabetes)	98
	Children	40
	Obese individuals	98
Correct answer	Three selected	2

Results: prevention and transmission

Question	Options	Proportion selected (%)
Which of the following are methods of preventing infection with COVID-19? (Select all that apply)	Washing hands regularly with soap and water, or cleaning them with alcohol-based hand rub	92
	Wearing a face mask	92
	Avoiding touching your face	92
	Covering your mouth and nose when coughing or sneezing	97
	Staying home if you feel unwell	93
	Practising physical distancing by avoiding unnecessary travel, etc.	91
Correct answer	All options correctly selected	39
How is COVID-19 transmitted? (Select all that apply)	Through the air (airborne)	86
	Contact with contaminated objects and surfaces	91
	Respiratory droplets	89
	Direct contact with infected persons	90
	Emptying latrines and handling of waste	83
Correct Answer	All three correctly selected	16

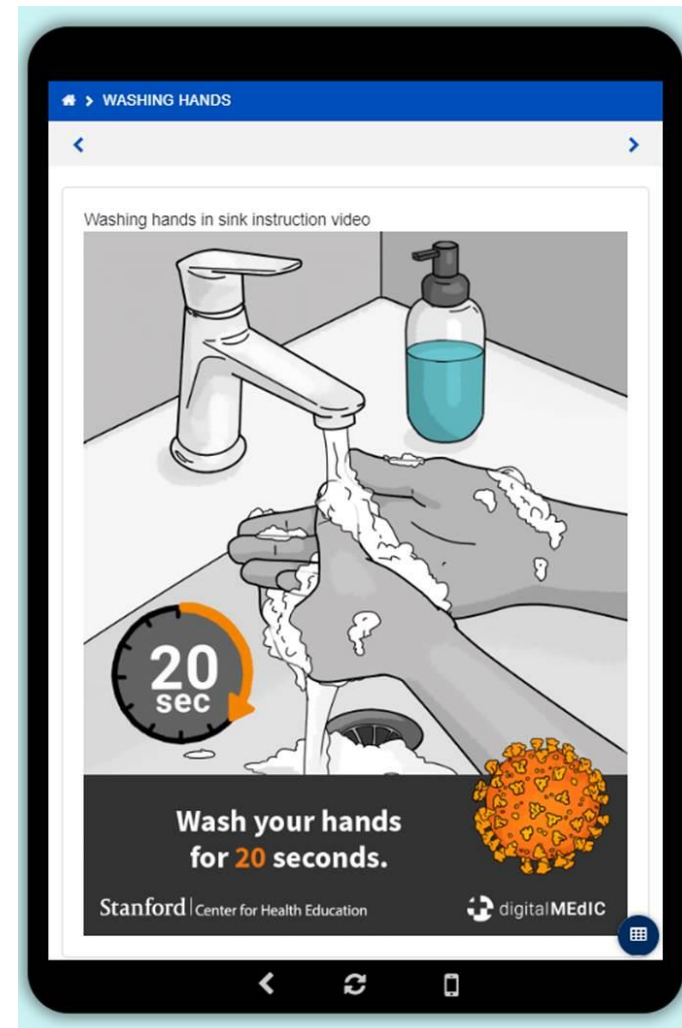
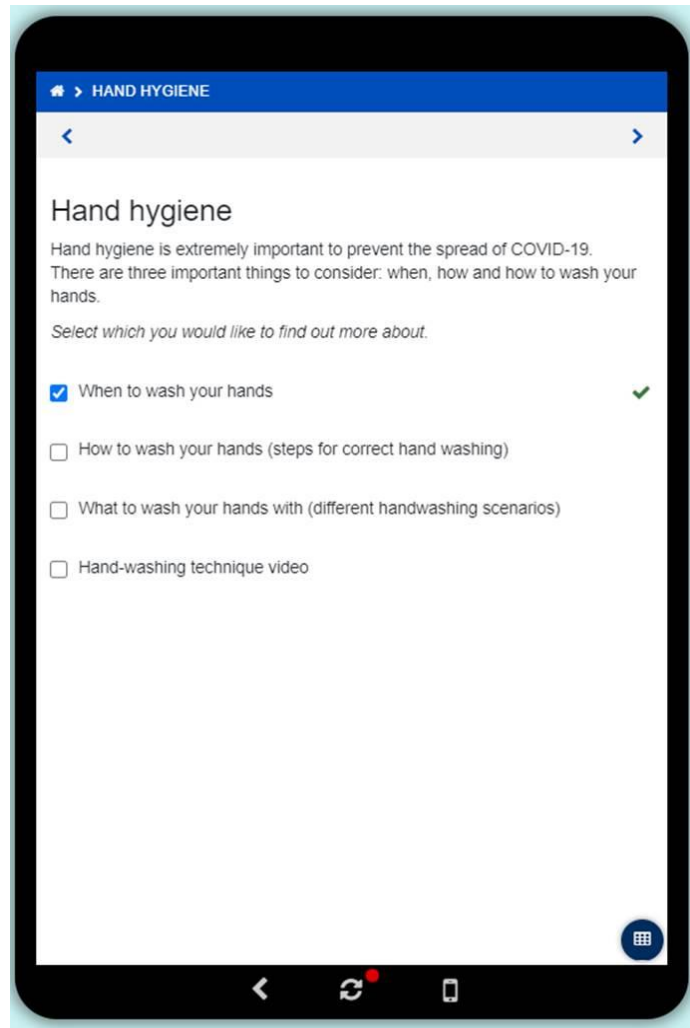
Results: prevention, transmission and treatment

Question	Options	Proportion selected (%)
What is the minimum length of handwashing time recommended to effectively prevent onward transmission?	10 seconds	21
	20 seconds	16
	30 seconds	15
	60 seconds	45
	Correct answer	16
A person infected with COVID-19 who does not show symptoms cannot spread the coronavirus.	True	41
	False	57
	Unsure	2
Correct answer		57
If you have symptoms of COVID-19, what measures should be taken? (Select all that apply)	Self-isolate by staying at home for seven days	82
	Get plenty of rest	28
	Stay hydrated and take paracetamol	24
	Contact your local health facility or <i>Alô Vida</i>	48
	Wear a face mask	52
	Monitor your symptoms regularly	30
	Correct answer	All of the above

upSCALE and COVID-19

Priority area	Activities	Technology solution(s)
Awareness	Improve community awareness and promote best practice in COVID-19 risk management in the community and by APEs.	<ul style="list-style-type: none"> • <i>KAP survey</i> • <i>SMS to all APEs including non upSCALE users</i>
Education	Support APEs to mitigate the risk of increased morbidity from high burden diseases in the community due to lack of differential diagnosis and ensure fever management is appropriately adapted through the incorporation of the COVID-19 algorithm into the current case management platform.	<ul style="list-style-type: none"> • <i>Signposting</i> • <i>Add-on modules for COVID-19 information, plus appropriate changes to the current algorithms</i>
Stock control	Support the supply of COVID-19 materials, such as personal protective equipment (PPE), along with essential APEs commodities.	<ul style="list-style-type: none"> • <i>upSCALE incorporation of APEs' PPE commodities</i>
Disease surveillance	Monitor and map the likely spread of COVID-19 in the community through the ongoing monitoring of fatalities and history of main symptoms in the community to better inform the Mozambique response.	<ul style="list-style-type: none"> • <i>COVID-19 dashboard</i> • <i>Symptom tracking</i>

Education modules



upSCALE COVID-19 surveillance: symptom tracking

- Data collection form based on current paper forms highlighted in guidelines.
- Developed based on existing Dimagi form.

Anexo B1: Livro de registo da triagem comunitária

ANEXO B 6. Livro de Registo de Triagem Comunitária

The image shows a detailed data collection form titled 'ANEXO B 6. Livro de Registo de Triagem Comunitária'. The form is structured as a grid with multiple columns and rows. The columns are organized into several sections, including patient identification, demographic information, and various clinical and screening parameters. The rows are designed for individual patient entries, with dashed lines indicating the structure of the data fields. The form is presented in a light blue and white color scheme, typical of digital data collection templates.

Port of Entry Surveillance

- Registration
- Screen Traveller**
- Manage High Risk Travellers
- Conduct Secondary Screening
- Add Travel Contacts
- View Travel Contacts
- View Medical Referrals
- Convert Low Risk Travellers
- Convert to High Risk Traveller
- Add...

Screen Traveller

+ Add Question

- Current temperature: °C
- confirmed_fever
- **WARNING** This traveller has a fever (≥ 38 °C).
- Symptoms
 - Today, or in the past 48 hours, have you had any of the following symptoms?
 - fever
 - Fever (≥ 38 °C) or history of fever, feeling feverish or having chills
 - + Add Choice
 - Yes
 - No
 - Unknown
 - .0 If known, specify maximum temperature: °C
 - cough
 - + Add Choice
 - Yes
 - No
 - Unknown
 - If Yes, date of onset
 - shortness_of_breath
 - Shortness of breath

Saved | App Summary | Manage Case

The purpose of this form is to identify travellers...

Label | Delete

Display Text: The purpose of this form is to identify travellers who may be symptomatic with or were

Question ID: intro

Logic

Display Condition

Validation Condition

Media

Add Multimedia: image, audio, video, video-inline, expanded-audio

image

Working as teste.ape1. Use e.zandamela@malariaconsortium.org.


SCREEN TRAVELLER

Fever (≥ 38 °C) or history of fever, feeling feverish or having chills

Yes

No

Unknown



Conclusions and next steps

- Adaptations to the upSCALE digital platform enabled the Ministry of Health, supported by Malaria Consortium, to rapidly gather essential insight on the COVID-19 knowledge gaps and misconceptions of APEs.
- The results helped shape and target relevant messages, vital for ensuring a successful COVID-19 response.
- A daily series of SMS messages (approx. 200,000) — shaped by knowledge gaps highlighted via the KAP study — were developed and sent to a total of approx. 2,500 APEs (including all upSCALE app users) to reinforce MoH messaging and dispel misconceptions.
- This study demonstrates the importance of understanding community health workers' COVID-related knowledge, attitudes and practices when (feasibly) adapting digital health tools — in this case the upSCALE app — to better support CHWs' as part of the COVID-19 pandemic response.
- Development continues with the launch of an updated COVID-19 symptom tracker in Q1 2021 (within the DHIS2 instance), which will have following indicators:
 - % of population with suspected COVID-19
 - % of population offered a test
 - % of population with a positive test
 - Age/gender/location disaggregation.

Acknowledgements

Ministry of Health - PNAPE-MISAU

Health district staff

Head of health facilities

APEs

Community members



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Thank you

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