



# Lessons from using SALAMA (DIGIT HCM) health campaign management platform to implement and optimise seasonal malaria chemoprevention (SMC) in Nampula, Mozambique

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malaria  
**consortium**  
disease control, better health

# Contents

- Context
- Objectives
- Methodological approach
- Results (lessons learned)
- Conclusions

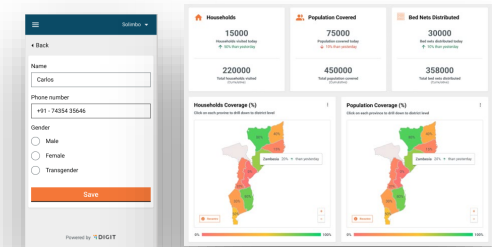
# Context: SMC

- Seasonal malaria chemoprevention (SMC) is a community-based intervention that aims to prevent malaria infections in areas where the malaria burden is high and transmission is seasonal. SMC involves the monthly administration of medicines — sulfadoxine-pyrimethamine plus amodiaquine (SPAQ) — to children aged 3–59 months
- Mid-term review of the Malaria Strategic Plan 2017–2022 recommended SMC as a strategy to accelerate the impact in provinces with a high burden of malaria
- Following an initial pilot phase, SMC was introduced in Mozambique in all 23 districts of Nampula province, reaching approx. 1.3 million children (2022/2023)
- In 2023/2024 (the second year SMC was implemented at scale) digitalisation was introduced into campaign planning and implementation, reaching approx. 1.5 million children.



# Context: Campaign digitalisation in Mozambique

- Progress in digitalisation of SMC campaigns is part of a broader vision for integrated campaign digitalisation in Mozambique
- Mozambique's National Malaria Control Programme (NMCP) have shown strong leadership in exploring how health campaigns can be strengthened using digital tools, and engaged with global stakeholders on coordinated, integrated approaches to sustainable health campaign digitalisation
- Use of SALAMA (DIGIT HCM) started with insecticide-treated net (ITN) campaigns (2022), then expanded to SMC in 2023.



Campaigns using SALAMA



ITN campaign



SMC campaign

# Why digitalise SMC?

- Obtain transparency on how data have been collected, where and by whom
- Reduce time between data collection and analysis, enabling effective use of data for decision-making to improve campaign management
- Real-time stock monitoring to prevent drug shortages and reallocate excess
- Faster tracking of adverse medication effects to allow rapid follow-up
- Enable data reuse and optimisation of campaign investment
- Improve data storage and flow from community to national levels
- Automatic integration with national dashboards

## **OBJECTIVE:**

**To share reflections and lessons on the 2023/24 SMC campaign digitalisation process in Mozambique, from planning and training to implementation of the SALAMA application**

**Methodological approach**

# Key components of digitalising SMC

## Management, coordination and planning

Agreement on scope and scale of digitalisation

Multi-stakeholder partnerships and coordination

## Application development

Definition of SMC programme needs

Informing development of application (SALAMA) workflows, user journeys and dashboards

Testing

## Training

Cascade training approach from national training of trainers down to health facilities

Refresher training at health facility level

## SPAQ distribution

Digitally enabled door-to-door SPAQ distribution

10,900 community distributors using SALAMA, reaching 1.5 million children

All data collection digital

## Supervision

National, provincial, district and community level supervision

Data-driven supervision and oversight

Digital supervision checklists

## Monitoring and evaluation

Near real-time data; dashboards updated when users synced devices

Interactive dashboards and reports

## Data review and data-informed decision-making

Daily end-of-day data review meetings, powered by dashboards

Data-informed decisions (e.g., targeted supervision or support) to improve campaign performance

## Technical support

Central and provincial digital support teams

Response to issues reported via SALAMA helpdesk and WhatsApp group

Use of data to identify and resolve issues

# Main results: Lessons learned and challenges

# Management, coordination and planning

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Category	Key points
Successes	<ul style="list-style-type: none"><li>• Strong NMCP leadership demonstrated at central and provincial levels</li><li>• Effective data ownership by provincial teams motivated and guided activities</li></ul>
Challenges	<ul style="list-style-type: none"><li>• Deviations from the plan increased costs and created unexpected needs (e.g., additional supervisors, vehicles and daily allowances)</li><li>• Delays in starting the campaign</li></ul>
Lessons	<ul style="list-style-type: none"><li>• Strong leadership enhances coordination and promotes efficient data use</li><li>• Early identification of potential deviations can mitigate impacts</li></ul>
Recommendations	<ul style="list-style-type: none"><li>• Conduct regular reviews to ensure alignment with the original plan</li><li>• Develop contingency budgets to address unexpected needs</li></ul>

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# Application development

Category	Key points
Successes	<ul style="list-style-type: none"><li>• Technical working group (TWG) actively shaped product flow</li><li>• Key app functionalities operational</li><li>• Reliable offline data collection with late synchronisation capability</li></ul>
Challenges	<ul style="list-style-type: none"><li>• Delays in forming TWG, and activity overlaps with NMCP team</li><li>• Many features requested in a short time, requiring a high level of engagement</li><li>• Some features incomplete or untested</li></ul>
Lessons	<ul style="list-style-type: none"><li>• Early TWG engagement ensures better design and timelines</li><li>• Realistic timelines improve feature delivery</li></ul>
Recommendations	<ul style="list-style-type: none"><li>• Engage TWG early in development and coordinate NMCP schedules to avoid overlaps</li></ul>

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# Training

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Category	Key points
Successes	<ul style="list-style-type: none"><li>• Delivered at all levels</li></ul>
Challenges	<ul style="list-style-type: none"><li>• Incomplete application features during training (e.g., supervision)</li><li>• Poor internet connection in conference room during provincial ToT</li><li>• Lack of printed manuals for app guidance in health facilities</li></ul>
Lessons	<ul style="list-style-type: none"><li>• Ensure apps are fully updated pre-training</li><li>• Printed materials are vital for areas without electricity</li><li>• Prioritise digital literacy in hiring</li></ul>
Recommendations	<ul style="list-style-type: none"><li>• Update apps before training</li><li>• Provide manuals for remote areas</li><li>• Offer data bundles for uninterrupted training sessions</li></ul>

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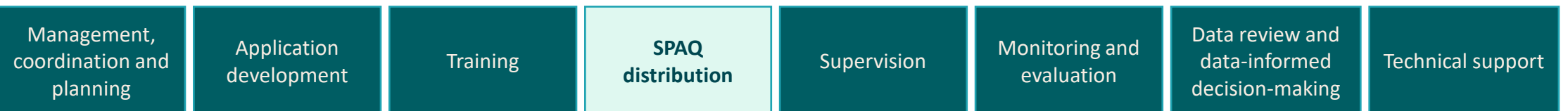
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# SPAQ distribution

Category	Key points
Successes	<ul style="list-style-type: none"><li>• Users' ability to use the SPAQ distribution module improved with each cycle</li><li>• Data collection was reliable, and offline work was possible without losing data</li></ul>
Challenges	<ul style="list-style-type: none"><li>• Increased time on SPAQ administration</li><li>• Duplicate records and errors in SPAQ wasted data, based on misunderstandings on definitions and how to use the app</li><li>• Synchronisation issues, missing organisational levels, untranslated text</li></ul>
Lessons	<ul style="list-style-type: none"><li>• It is essential to review data to be able to identify instances of fraud/fake data</li><li>• Real-time data monitoring prevents inconsistencies</li><li>• Ensure users have sufficient training on all components of the app</li></ul>
Recommendations	<ul style="list-style-type: none"><li>• Develop anti-fraud strategies, equip supervisors at all levels with the ability to identify data outliers</li></ul>



# Supervision

Category	Key points
Successes	<ul style="list-style-type: none"><li>Digital forms were used to evaluate community distributors (CDs) competencies</li><li>Real-time data-driven supervision by national, provincial, district and community levels</li></ul>
Challenges	<ul style="list-style-type: none"><li>CD supervisors did not have access to their team's performance dashboards</li></ul>
Lessons	<ul style="list-style-type: none"><li>Extend data-driven supervision to lower levels, including communities</li></ul>
Recommendations	<ul style="list-style-type: none"><li>Establish team performance dashboards for CD supervisors and health facility coordinators</li></ul>

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coordination and  
planning

Application  
development

Training

SPAQ distribution

Supervision

Monitoring and  
evaluation

Data review and  
data-informed  
decision-making

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# Monitoring and evaluation

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Category	Key points
Successes	<ul style="list-style-type: none"><li>• Dashboards enabled real-time tracking of campaign data</li></ul>
Challenges	<ul style="list-style-type: none"><li>• Difficult to identify errors or track absent households</li><li>• Referral cascades and supervision data not easily accessible</li></ul>
Lessons	<ul style="list-style-type: none"><li>• Quick access to outliers improves decision-making</li><li>• Add validation indicators to dashboards</li></ul>
Recommendations	<ul style="list-style-type: none"><li>• Integrate absent household tracking and supervision results for transparency</li></ul>

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# Data review and data-informed decision-making

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Category	Key points
Successes	<ul style="list-style-type: none"><li>• Data discussion meetings took place throughout SPAQ distribution at the end of each day for all campaign cycles</li></ul>
Challenges	<ul style="list-style-type: none"><li>• Data not up to date and/or incomplete due to lack of charge on some devices before synchronisation and in some areas with poor internet connection</li></ul>
Lessons	<ul style="list-style-type: none"><li>• It is important to have a source of electricity for distant health areas without an electricity supply and those with poor internet connection</li></ul>
Recommendations	<ul style="list-style-type: none"><li>• Purchase power banks or rent small electricity generators to allocate to health facilities</li></ul>

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Management,  
coordination and  
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Application  
development

Training

SPAQ distribution

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and evaluation

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# Technical support

Category	Key points
Successes	<ul style="list-style-type: none"><li>• District reported main issues through WhatsApp group and SALAMA</li><li>• Helpdesk team (with both national and provincial elements) were able to resolve — both virtually and in the field — most reported issues</li></ul>
Challenges	<ul style="list-style-type: none"><li>• Difficult to track and report on the number and type of issues reported through WhatsApp</li><li>• Equipping district and health facility levels with technical support abilities</li></ul>
Lessons	<ul style="list-style-type: none"><li>• It is important to have a helpdesk team at all levels, as well as a frequently-asked questions (FAQ) document</li></ul>
Recommendations	<ul style="list-style-type: none"><li>• Develop an FAQ document and make it easily available</li><li>• Include technical support package within trainings</li></ul>

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development

Training

SPAQ distribution

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evaluation

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decision-making

Technical  
support

# Conclusion

- Effective partnerships, coordination and communication between key stakeholders were critical in facilitating campaign digitalisation rollout in all 23 districts simultaneously and enabled timely escalation and resolution of issues
- Access to digital dashboards and near-real-time data enabled the provincial government to make decisions based on accurate campaign data, leading to better use and rationalisation of campaign resources including targeting supervision, training and support activities
- Community distributors were able to use SALAMA, enabling the complete removal of paper-based data collection.

Thank you!