

# BURUNDI AND UGANDA CASE STUDIES: THE USE OF ELECTRONIC PAYMENT SYSTEMS DURING INSECTICIDE-TREATED NET (ITN) MASS CAMPAIGNS



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**amp** | The Alliance for  
Malaria Prevention

Expanding the ownership and use of mosquito nets

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# BACKGROUND

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A significant number of health programmes deliver commodities and services through campaign approaches, including the Expanded Programme for Immunization (EPI), neglected tropical diseases (NTDs) and malaria for different interventions such as indoor residual spraying (IRS), seasonal malaria chemoprevention (SMC) and ITN distribution. These campaigns involve thousands of campaign workers from the national to the community level who require payment for their services. For decades, most payments have been made in cash, often based on paper records, with money transferred through the banking system from national to district level and then withdrawn to pay different campaign actors according to their daily rate and the number of days that they have worked.

For several years, governments and funders have started to implement cashless payments to personnel through electronic payment systems during health interventions, in particular health campaigns with large numbers of people to be paid over a relatively short period of time. Electronic payment systems are defined as a way of making transactions or paying for goods and services through an electronic medium, without the use of cheques or cash<sup>1</sup>. Africa's patchy personal banking industry helped make it a world leader in mobile money, allowing consumers and small enterprises to

transfer cash via a basic mobile phone handset. At the start of the COVID-19 pandemic, restrictions on movement and increased wariness of handling physical cash due to disease transmission risks helped increase sub-Saharan mobile money transaction volumes by 23 per cent to USD 490 billion in 2020<sup>2</sup>. Despite these advances, there remain significant challenges for a full transition to electronic payment systems in many countries, including infrastructure to support both internet and wireless transactions in remote or rural areas, lack of access to mobile devices to send and receive funds and limited financial/mobile money service providers. Electronic payment systems may also contribute to gender inequality and resource imbalances where women are less likely to own mobile devices.

For health campaigns, the transition from cash to electronic payments has largely been in response to risks related to cash-based payments, often in areas with low or limited security, making the transactions liable to loss or theft. While mitigation of this risk is important, it has also been noted that there are risks to transitioning to non-cash-based payment systems that can lead to a knock-on effect for health campaign outcomes and subsequent efforts to deliver health services through the same community actors when payments are late or are not made at all.

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1. <https://securionpay.com/blog/e-payment-system/>

2. Africa's digital race becomes a scramble: [www.reuters.com/breakingviews/africas-digital-payments-race-becomes-scramble-2021-05-05/](http://www.reuters.com/breakingviews/africas-digital-payments-race-becomes-scramble-2021-05-05/)

# THE CASE STUDIES

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## BURUNDI

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### The context

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With an estimated population of over 11.5 million<sup>3</sup>, malaria remains a significant problem in Burundi. According to the National Malaria Strategic Plan, malaria is the leading cause of illness and death in the country. Eight of Burundi's 18 provinces, home to 56 per cent of the population, are at risk of malaria epidemics<sup>4</sup>. Burundi is not among the ten highest burden countries in Africa but experienced a 51 per cent increase in malaria cases from 2015—2018, the highest of any country in WHO's Central Africa Region<sup>5</sup>.

Burundi's Ministry of Health through its National Integrated Malaria Control Programme (PNILP) and in collaboration with the non-governmental Principal Recipient for the Global Fund mala-

ria grant, CARITAS, started planning for their ITN distribution campaign in 2019 with the implementation to be conducted early to mid-2020. The key campaign strategic documents (campaign plan of action, logistics plan of action, monitoring and evaluation plan, social and behaviour change plan, risk assessment and mitigation plan and the budget) were updated and feedback given by the Alliance for Malaria Prevention (AMP) technical advisers and Global Fund country team members. These documents took into consideration the implementation successes and challenges of past campaigns, lessons learned and best practices especially around the payment strategy.

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3. The World Bank Data, population total - Burundi. <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=BI>.

4. République du Burundi, Ministère de la Santé Publique et de la Lutte contre le SIDA (MSPLS, 2018). Plan Stratégique National de Lutte Contre le Paludisme 2018—2023.

5. World Health Organization (WHO). World Malaria Report 2019.

## An innovative approach

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During the planning phase for the 2019—2020 ITN campaign, Burundi's PNILP introduced a hybrid payment system (physical cash payments and electronic payments) that would be used during the ITN campaign. At the national level, Burundi used banks (BANCOBU) to transfer programme funds to some national level campaign workers and to make payments to some vendors, such as warehouse owners, whereas at the implementation level, cash payments were made directly to the campaign actors (household registration personnel, ITN distributors, training participants, etc). The cash payments at the village and community level were made by bank agents from BANCOBU

through a Point of Sale (POS) system where campaign actors' names that were submitted by their supervisors were verified and validated before a payment was made.

Burundi's use of POS systems to validate and initiate payments to campaign actors was an innovative way to technically advance processing of payments. The field supervisors furnished the names and contact information of the campaign actors who were engaged during various campaign activities and once the verification had taken place then the POS agents (who were bank agents from BANCOBU) would pay the campaign personnel.

## Challenges

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During the 2019—2020 ITN campaign, the PNILP experienced major challenges with this model of payment where some 19,000 campaign actors who were largely at the community level did not receive their payments. This was due to a number of factors:

1. Lack of proper validation of campaign workers. Some did not receive a payment and some who did receive a payment had not participated in the implementation.
2. Lack of a tried-and-tested electronic payment system. The POS system of payment had not been tested in the communities through a dry run or piloted in one or two implementation sites where these payments were to be made to mitigate against the risks associated with making payments to a large group of workers.
3. The lack of training of payment personnel. The personnel who were to make these payments had not been trained nor did they understand the magnitude of their assignment.
4. Lack of proper planning and coordination between the national programme team, the finance team, the sub-committees and the campaign actors. There were no budgets or financial roadmaps that were disseminated and shared from the central level to the peripheral level for everybody involved in the payment process to know and understand what was required of them and how they needed to go about making payments, when to make these payments, and what is required to make and/or receive a payment. This same information was not shared with the campaign actors for them to know how, when, where and what was required to receive a payment. These were critical knowledge and information gaps that were not addressed.

**Table 1:** Number of campaign actors and method of payment

<b>Coordination team</b>	30	Bank
<b>ITN reception committee</b>	60	Bank and cash
<b>Warehouse inspection team</b>	36	Cash
<b>Logistics training of trainers</b>	45	Bank and cash
<b>Logistics training</b>	27	Bank
<b>Microplanning training of trainers – central</b>	36	Bank and cash
<b>Microplanning workshop</b>	1,666	Bank and cash
<b>Implementation training of trainers</b>	173	Bank and cash
<b>Household registration team training</b>	12,542	Bank and cash
<b>ITN distributors training</b>	10,468	Bank and cash
<b>Data managers training</b>	280	Bank
<b>Household registrars</b>	12,575	Cash
<b>ITN distributors</b>	15,702	Cash
<b>Net handlers (offloaders)</b>	139,572	Cash
<b>Supervisors - guards</b>	129	Cash
<b>Assistant store managers (one per store)</b>	129	Cash
<b>Guards (one per store)</b>	129	Cash

## Recommendations

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For Burundi's PNILP to implement a successful payment strategy during their next ITN campaign, they will need to take into consideration the following:

- 1.** All the risks of making physical cash payments to a large number of participants in their implementation areas/stations need to be considered.
  - a.** A financial payments roadmap detailing the number of people to be paid, the activities they are engaged in, the amounts to be paid, what is required to receive a payment, when to make these payments, how to make these payments and where to make these payments should be developed.
  - b.** This information should be shared with the key people who will be engaged in the campaign payments so that they are all reading from the same script.
  - c.** A test run or a pilot of payment systems adopted should be made to ensure the gaps are known, understood and addressed before the actual implementation takes place.
  - d.** The services of agents who have the expertise and the capacity to assist in making the payments should be engaged and the financial payment plan/roadmap shared with them.
- 2.** Electronic payment systems should be selected that have a validation and verification component/tool that will enable seamless payments to be made to the correct campaign actors. Alternatively, if digitalization is implemented for the next campaign, it should include a human resources management component to support timely payments.
- 3.** The users of the selected electronic payment systems should be trained using modules specific to payment planning and implementation to enhance their skills and knowledge on the usability and functionality of the system(s).
- 4.** Back-up systems such as Excel spreadsheets that are user-friendly and easy to understand and navigate should be prepared that can capture and validate the campaign actors' information (names, contact numbers, etc.).

## Conclusion

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Burundi's payments process, while innovative, was marred by the lack of proper planning and execution of their payments strategy that left thousands of campaign actors without an income. The lessons learned should be used to advise the planning and implementation of

Burundi's next ITN distribution campaign which should include a detailed financial roadmap which can then be employed together with an electronic payment system that has a validation component to it.

# UGANDA



## The context

Uganda's Ministry of Health (MoH) through their National Malaria Control Division (NMCD) had planned their 2020 ITN distribution campaign before the COVID-19 pandemic, but the planning had not considered a large-scale electronic payment system for paying campaign actors. With the onset of the pandemic, the NMCD reviewed strategies and proposed adaptations for safe implementation of all activities, including payments at all levels in order to avoid the spread of COVID-19 through physical handling of cash. Advantages of transitioning to electronic payments beyond minimizing COVID-19 transmission included limiting risk of fraud and loss through theft or pilferage of programme funds and ITNs.

Uganda's Ministry of Health (MoH) had used electronic payment systems for actors for other health interventions during the COVID-19 pandemic but had not planned for the same in their ITN distribution campaign. The national

malaria programme identified an estimated number of 359,005 people required to be engaged and paid in the ITN campaign. In addition to ensuring timely payments to the campaign personnel, there were important risks associated with paying such a huge number of people, ranging from security of the programme funds used to the security risks of both the payer (the one administering the payment) and the payee (the one receiving the payment).

The NMCD prepared and advertised a request for applications for an organization to undertake the planning and design of the electronic payment system, plan for its implementation, contract service providers and have oversight of payment progress in the field during the campaign. *Klynveld Peat Marwick Goerdeler* (KPMG) successfully won the bid and was selected to steer and manage the processing of payments to the various campaign actors.



The NMCD partnered with a number of banks (that had a regional presence) and multiple mobile network operators as part of the electronic payment systems used before, during and after the ITN campaign. This is because

some of the vendors such as warehouse owners held accounts in different banks and implementing actors used a variety of different mobile phone networks.

## Innovative approach

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Uganda's NMCD tested the use of mobile money as an electronic payment system, which was not limited to payment processing but also included biodata and financial management. The objective was to use effective and efficient methods to process timely campaign-related payments to implementing actors while ensuring their safety (in terms of minimizing the risk of COVID-19 transmission).

The NMCD collaborated with the Ministry of Finance, the Ministry in charge of Information, Communication and Technology (ICT), and the fiduciary assurance agents who played an oversight role. The Ministry in charge of ICT was instrumental in managing the biodata of the payment recipients while the Ministry of Finance played a key role in the selection of the electronic payment systems to be used. This involved partnering with multiple mobile network operators (e.g. MTN, Africell, Airtel, etc.) who have a large number of subscribers, have good network capabilities and mobile phone penetration and good and accessible internet connectivity.

Before the payments were made to the campaign actors, the NMCD had to validate all the data (household registration and distribution personnel and their attendance) submitted

by the field supervisors (those who were overseeing the trainings, the registration personnel and the ITN distributors) by ensuring the names and the phone numbers provided were for those who either participated in a training, registered households or were involved in the distribution of nets. The field supervisors had uploaded and submitted these data via the digital collection platform to ensure the right people were being paid. The NMCD then transferred these data to KPMG to process payments.

There were three types of payments that were made during the ITN distribution campaign:

1. Bank to bank transfers - for large sums of money transferred to district cashiers as per the campaign budget, money paid to service providers and some human resources salaries and per diems for monitoring and evaluation
2. Mobile money – campaign funds were paid to campaign actors such as household registration teams and ITN distributors
3. Cash payments – these were made to day labourers and where campaign actors worked in areas that had little or no access to mobile money agents and banks

## Best practices and successes

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The use of three payment modalities facilitated easier and faster movement of funds from the national to the peripheral level where most activities were taking place. At the peripheral level (districts, parishes and local councils), the involvement of cashiers and technical support from KPMG to collect and validate the field lists (participants' lists, etc), receive and disburse funds made it easier to track the funds and account for the funds received.

Detailed terms of reference (TOR) for the selected partner for electronic payments ensured that they could undertake additional financial management responsibilities and reduce risks associated with fraud, diversion of programme funds and poor accountability.

The use of electronic payment systems enabled the NMCD to track and account for the transfer of funds to the district level accounts and identify the implementation areas where the campaign actors had not been paid or had received cash payments.

**Table 1:** The total number of personnel trained, engaged and paid during the ITN campaign

WAVE	1	2	3	4	5A	5B	Payment modality
Training of trainers	38	38	38				Bank
District sensitization	50	56	78	60	50	28	Mobile money
Subcounty technical support	798	888	940	748	440	298	Mobile money and cash
District Task Force	425	476	663	510	425	204	Mobile money and cash
Sub-county Task Force	2,793	3,108	3,290	2,618	1,540	1,043	Mobile money and cash
Parish Chiefs	2,038	1,955	2,362	1,653	254	773	Mobile money and cash
Local council 1	15,830	13,425	17,035	12,545	2,579	5,328	Mobile money and cash
Data entry clerks	31,654	26,878	32,294	24,798	9,696	11,053	Cash
Village Health Teams	31,599	26,921	33,956	25,071	9,640	10,662	Mobile money and cash
Store managers	700	884	896	733	508	312	Bank and mobile money
Local guards	797	936	936	758	494	338	Mobile money and cash

## The main challenge: delay in making some payments

Linkage between implementation data (those who participated in trainings, registering households, ITN distribution, etc.) and those who received payments was sometimes problematic. The electronic payment system did not have a verification or validation tool that would check the names and phone numbers of campaign actors engaged in trainings, registering households and distribution of ITNs. The verification of information for campaign actors to receive payments through the mobile money system was a manual and tedious process that required considerable person hours to complete. It was after this verification, which caused some delays, that the data were uploaded into the electronic payment system and funds then transferred immediately.

Intermittent internet connectivity in some implementation areas was a challenge in making timely payments. Once the supervisors received the attendance lists, they needed to travel to an area with good and accessible internet coverage to send the data. The field teams had to type out the names and contact information that were on the paper attendance lists into a Word document or Excel spreadsheet before sending to the central level for validation.

Poor mobile network in some hard-to-reach areas and electricity problems that delayed the sending of the attendance lists to central level for validation were also challenges. The supervisors would have to wait for stable mobile and internet connectivity to send the data or wait for power to be returned following outages, which affected data collection devices and laptops used to transmit the data.

## Recommendations

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Based on the experiences in the 2020—2021 mass ITN campaign, the Uganda NMCD has made the following recommendations for the 2023 campaign:

- When planning for the electronic payment system, the national team **must involve the finance account assistants or cashiers at the district level** who are key personnel that will use these systems to make payments.
- **Decentralize some payments from central to peripheral level**, especially payments that involve procurement of warehouse and storage spaces in the districts and sub-districts.
- **Update the Terms of Reference of the district finance officers or cashiers** and give them more responsibility for processing payments to foster close working relationships between them and the district health officers (DHO).
- **Evaluate the risks in urban centres and rural areas:**
  - ▾ In urban settings, incidences of fraud related to use of names of relatives to receive payments must be identified and addressed early. There is a need for close supervision, monitoring and verification before making payments. Put proper controls in place during pay-outs since there exists a high level of abuse. Funds are easily diverted and paid to “ghost workers”.
  - ▾ In rural settings, literacy levels are low and cash culture is common. People do not easily trust that funds can be sent and received electronically.
- Pilot the electronic payment system that has been selected for the campaign to ensure it works well in all areas targeted for the campaign. Ensure there is proper understanding of its functionality, address any bottlenecks and challenges early and train users (if necessary) on the various modules of the system.

## Conclusion

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In spite of some challenges, Uganda’s transition from using cash to electronic payment systems started well. The lessons learned will feed into planning by the NMCD for their next ITN distribution campaign. In particular, the lack of a verification and validation tool within

the electronic payment system that enables information about campaign actors to be verified (names, contact details, days worked, etc.) and validated before payment needs to be addressed urgently.



## AMP CONTACTS

To join the weekly AMP conference call each Wednesday at 10:00 AM Eastern time (16.00 PM CET) use the following Zoom meeting line:

<https://us06web.zoom.us/j/2367777867?pwd=a1lhZk9KQmcyMXNaWnRaN1JCUTQ3dz09>

You can find your local number to join the weekly call:

<https://zoom.us/j/2367777867>

To be added to the AMP mailing list visit:

<https://allianceformalariaprevention.com/weekly-conference-call/signup-for-our-mailing-list/>

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