Payment Use Case Maps

Digital Payments for Vaccine Campaigns

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01 Research overview

Research **Questions**

The arguments for digital payments in general are strong: they tend to be "**fast, accurate and secure**," while cash is "slow, inaccurate and open to graft and theft" (Better Than Cash Alliance, "BTCA"). Despite these encouraging arguments, a significant share of the world remains outside the digital economy, relying on **cash to receive income**, save "under the mattress" and pay for services – including healthcare services.

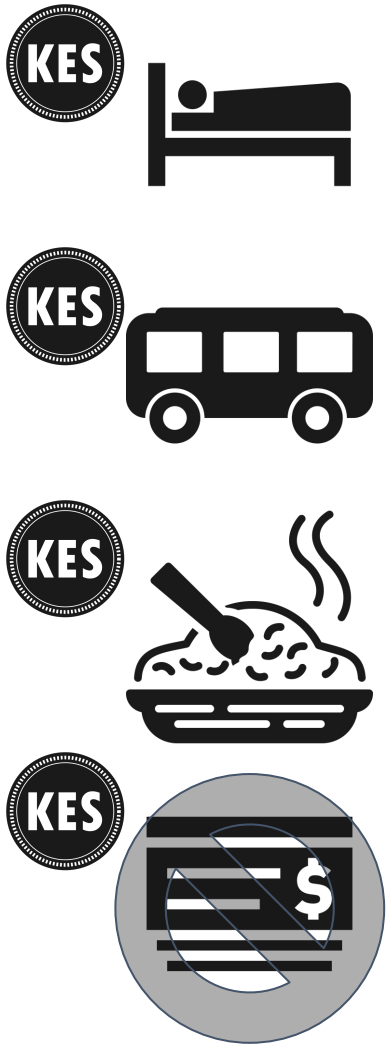
Prompt, regular, and accurate payments promise big improvements in health campaigns, such as vaccines, that rely on a large workforce of last-mile health workers. **Digital payments** facilitate recruitment and continued motivation. Programs stand to save substantial amounts associated with cash due to **errors, fraud, accounting controls, and security**. The **timeliness and accuracy** of payments for a vaccine campaign are critical determinants of the morale of the vaccine workforce. Controlling errors, delays, and fraud holds the potential to improve the **efficacy of a campaign** and, by extension, deliver on the mission.

However, it is not always clear that the benefits of digital payments completely outweigh the costs of doing business in cash. Sometimes, cash may trump digital when it comes to last-mile delivery in certain areas. At other times, digital interventions may require **significant upfront or continued investment** in technology that remains obscure or inaccessible.

Before we can develop hypotheses about whether digital payments are cost effective, we need to understand the specific workflows involved in preparing digital payments. These workflows will create the basis for subsequent cost-benefit analysis.

- Who disburses payments to healthcare workers for vaccine campaigns today? How are those payments delivered?
- How are payments to healthcare workers planned and authorized?
- How are healthcare workers registered by payer organizations?
- How do healthcare workers receive their payments? Where and when do workers receive cash? If they are paid into accounts, what accounts are used to receive the payments? And do they prefer to hold balances in accounts or to withdraw cash?
- What processes are required after disbursement? Consider inquiries and customer service; return of excess funds; accounting for use of funds; and updates to payment credentials over time.

Stylized facts: payments for healthcare workers in a measles catch-up campaign



Payments are largely in the form of allowances for accommodations, travel, and meals during the training and field work phases of the campaign.

Most staff are seconded to the campaign by their employers, such as the ministry of health for nurses and clinical officers.

While in some countries **incentive payments** are common for staff, the campaign does not pay the salaries of most frontline workers.

Stylized facts: Teams of four work for a period of ten days, receiving allowances beyond their normal monthly salary. Each team has a quota for vaccinations to administer during the period of the campaign, which reflect local populations and geography. Teams include both clinical and non-clinical personnel.

Partnership. A consortium of partners is required to plan, underwrite, and implement the campaign. Specific responsibilities are held by WHO, UNICEF, GAVI, UNOPS, and the Government / Ministry of Health.

Type of campaign. Fixed-post immunizations are typical of catch-up campaigns for measles and rubella. The type of vaccine and demographics of the target population determine whether distribution follows a fixed-post or other system, such as door-to-door.

Portrait Of Thoughtful Nurse Outside In Ppe Looking Away From Camera by Noun Project from NounProject.com

Geographic scope and methodology

Country	Regions	Organizations	Campaign type	Target population and coverage
Burkina Faso	No local participation in interviews.	National Ministry of Health (1) and Regional MInistry of Health (3).	Measles and rubella catch-up campaign	1.2 million children, ages 9-59 months, with the goal of 95 percent coverage.
Ethiopia	Addis Ababa, Oromia Region, Somali Region	City and sub-city within Addis Ababa; zone and woreda offices in Oromia and Somali.	Measles and rubella catch-up campaign	14.5 million children ages: 9-59 months
Kenya	Nairobi, Bungoma, Garissa, and Kajiado	County offices (3) Subcounty offices (3) Health posts (4), UNICEF and UNOPS finance staff.	Measles and rubella catch-up campaign	Ages 9-59 months, 22 counties, 4 million individuals, 95 percent coverage
Nigeria	Bauchi	National Ministry of Health, State Ministry of Health, WHO, and UNICEF.	Multi-purpose (Measles, meningitis, and yellow fever)	Measles, 9-59 months; Meningitis, 7-10y; Yellow fever, 9m - 44y. Target population of 30 million.

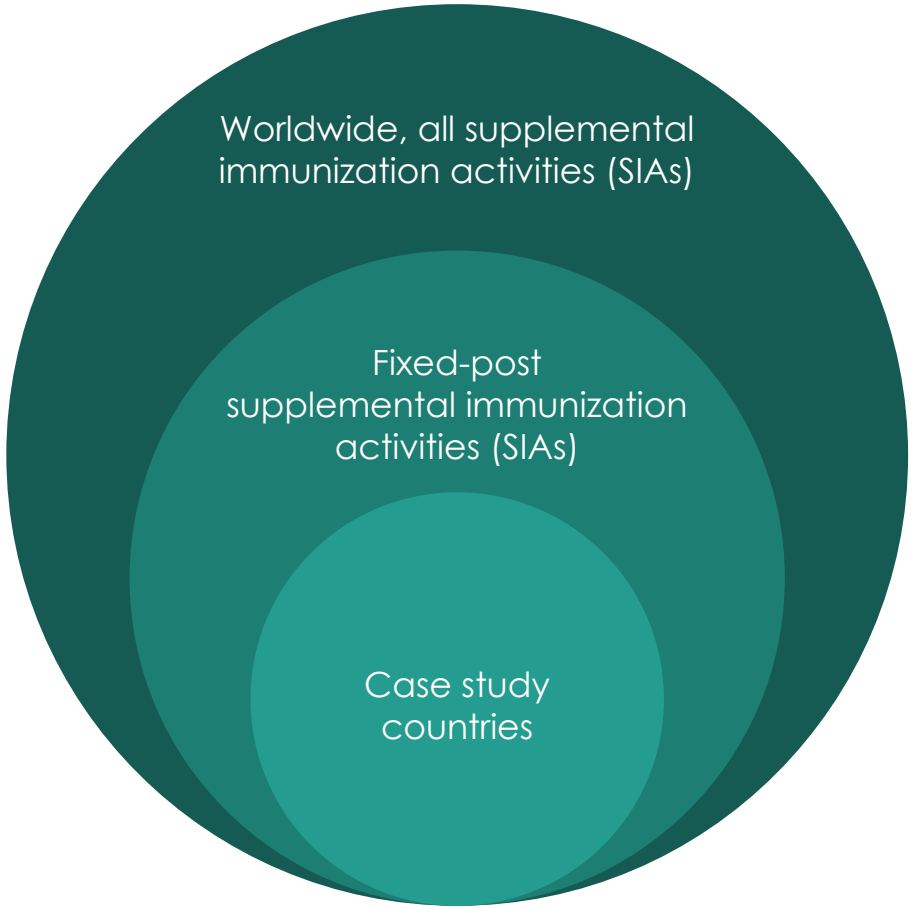
BFA selected four countries with similar, fixed-post immunization campaigns conducted within the past five years. Where possible, we selected measles campaigns.

We recruited contacts at the health ministry through BMGF senior program officers, and requested permission to conduct interviews with local offices and partners at UNICEF, UNOPS, and WHO through that network.

This study relies on in-depth interviews, with a duration of roughly 45 minutes. The interview covered respondents' workflows for immunization campaigns and related payments. We requested copies of financial records, paperwork, and budgets that are produced in the normal course of business. Follow-up interviews as needed for clarification.

Interviews were completed remotely by Zoom and WhatsApp, using English, French, and local languages.

Vaccine campaigns during the COVID pandemic



The COVID-19 pandemic caused pervasive delays in supplemental immunization activities (SIAs). In 2020, 532 campaigns were planned for 26 different interventions representing 13 diseases and 105 countries. Many of these planned campaigns were postponed, canceled, or suspended.

- **In the African region,** 55% of overall campaigns were delayed. Delays increased as the pandemic intensified. As of May 2020, delays affected 61% of measles campaigns were delayed, while by December, the rate of delays reached 78%.

Several of our case studies were carried out during the pandemic despite this trend. Ethiopia, one of Africa's most populous countries, is also reliant on SIAs, as they are considered one of the most cost-effective interventions for public health.

- **Ethiopia** had substantial measles outbreaks in 2014-2016. Hence, the Ethiopian government decided against pausing the measles vaccination campaign in light of Covid, and by July 2020, vaccinated 15 million children nationwide.

Source: Health Campaign Effectiveness Coalition (2021). The State of Health Delivery Campaigns.

Comparison with other vaccine campaigns

This study focused on four measles catch-up campaigns in different countries. This approach held constant the operational requirements of the type of campaign, while allowing for differences in countries' populations, healthcare resources, demographics, geography, and financial services. **Measles catch-up campaigns differ from other healthcare campaigns in their target populations, their operations, and their staffing requirements**. A national catch-up campaign typically spans many regions (or counties) of the country. It requires an injection, and therefore also a distribution system via fixed posts that are staffed largely by trained clinical personnel. These elements — targeting, distribution, and staffing — have consequences for the size and cost of measles catch-up campaigns. These campaigns are more extensive and more costly than, for example, polio campaigns, which target outbreaks and can avail a door-to-door campaign.

1 Targeted Population

Main sources:

- Campaign Calendar Dataset (CCD) ranging from 2017-2022
- Country documents ranging from 2016-2021 from the Gavi Vaccine Alliance: (example with Ethiopia)

"Case Study" campaigns	Other measles campaigns	Other campaigns
Measles & related campaigns covered in the scope of the study	Measles immunization programmes distributed alone or with other vaccines, via routine or Supplementary Immunization Activities (SIA).	Other immunization programmes (Polio, Rubella, Meningitis, Yellow fever, etc.)

2 Funding

Main sources:

- National Health Accounts Indicators (NHAI) from the Global Health Expenditure Database (WHO) ranging from 2016-2019
- Commitments and disbursements portal and Country Hub from Gavi ranging from 2016-2021

External expenditure or commitments	Government or Private
Assistance and support from organizations like Unicef, Gavi, WHO, etc.	Immunization programs financed by government health entities or other organizations

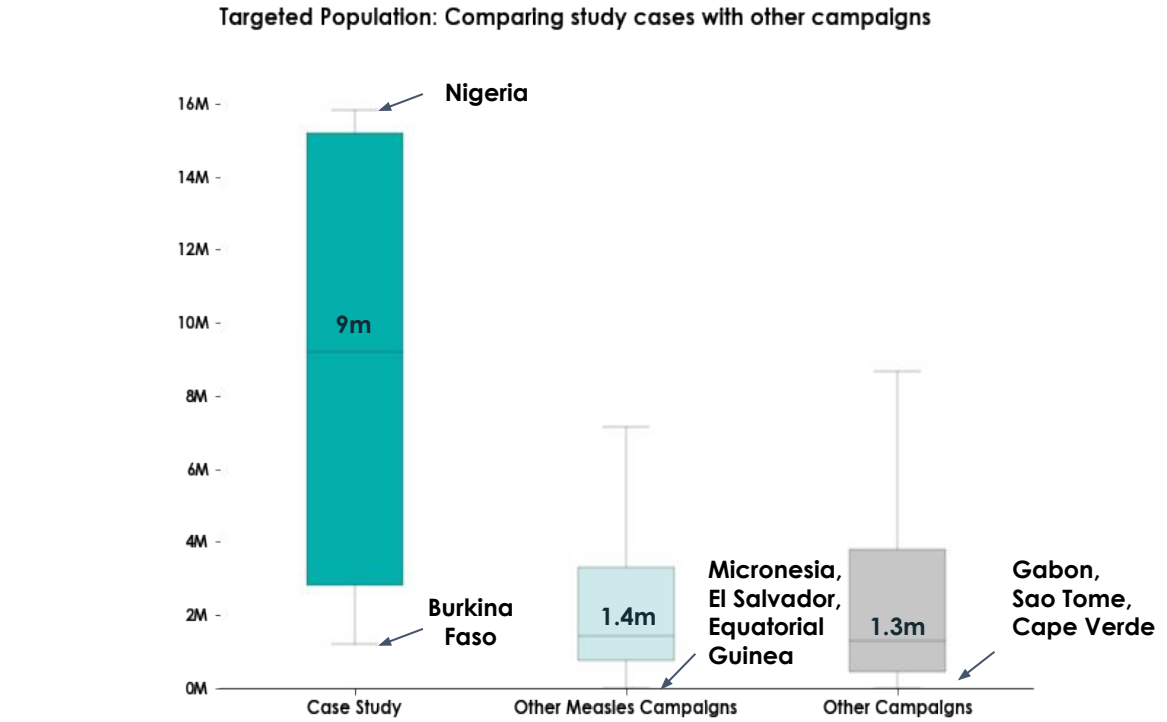
Target population: case studies are larger than the typical country

Our case studies are bigger than other immunization activities, mainly due to a small sample of campaigns (4) and countries involved: a mix of larger countries like **Nigeria or Ethiopia** and smaller countries like **Burkina Faso.**

Both comparison groups, "Other measles campaigns" and "Other campaigns," **have smaller target populations**. One reason for this is that there are simply more countries with small populations than large populations. The median target population for measles immunization programmes is roughly 1.3 million people, and 75 percent of campaigns target fewer than 4 million people.

The largest campaigns in the world, such as those in India and Pakistan, can be many times larger than the countries in the study.

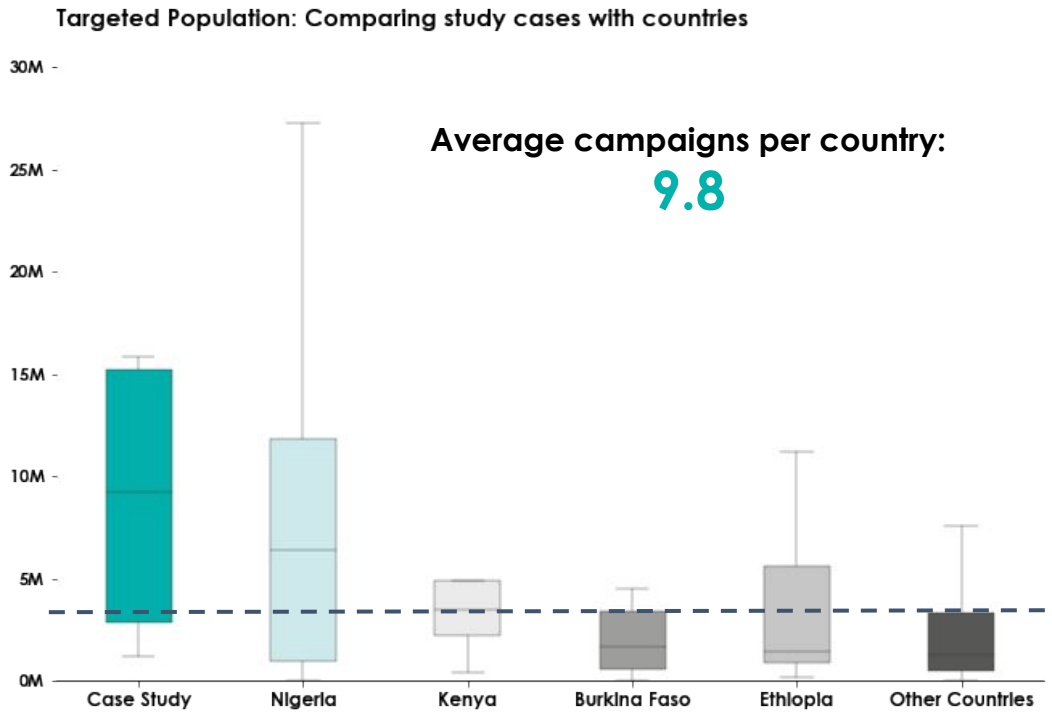
How to read the chart: The figure at right shows **distributions of the target population.** The boxplot shows the median size in each group (e.g., 9 million for case study countries) while the size of the box runs from the 25th to the 75th percentile, or the "interquartile range." By convention, the limits of the whiskers are either the extreme value (e.g., 16 million) or a distance based on the interquartile range. Any campaigns that fall outside the whiskers are outliers. Outliers such as India or Pakistan were omitted for clarity.



Campaigns	4	90	805

Target population: Nigeria and Ethiopia are the largest, and also the most populous countries

Average targeted population per country:
4.1 million



Average campaigns per country:
9.8

	Case Study	Nigeria	Kenya	Burkina Faso	Ethiopia	Other Countries
Campaigns	4	63	7	19	30	776

Nigeria and Ethiopia **have among the most extensive immunization programs** both for the number of campaigns and targeted population in the **last five years.**

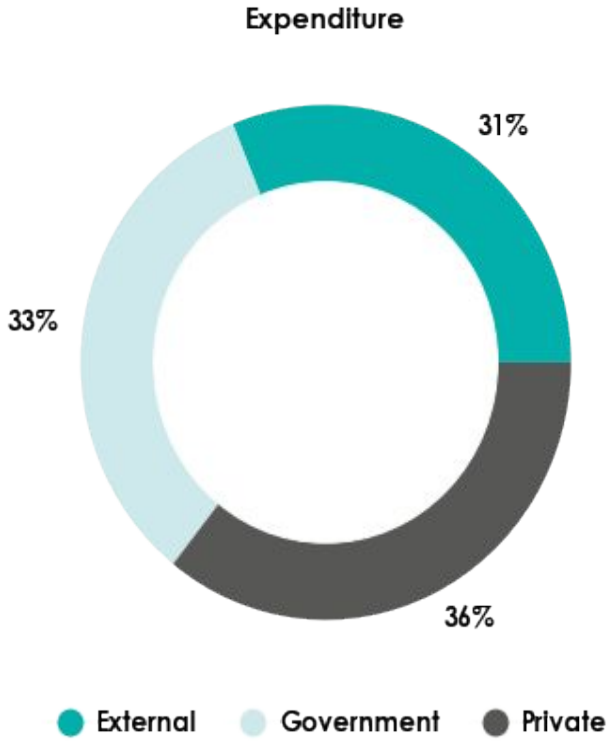
Although **Kenya** is a middle-size country, **has a very low number of campaigns** and a very small targeted population, elevating some important questions around **coverage or funding.**

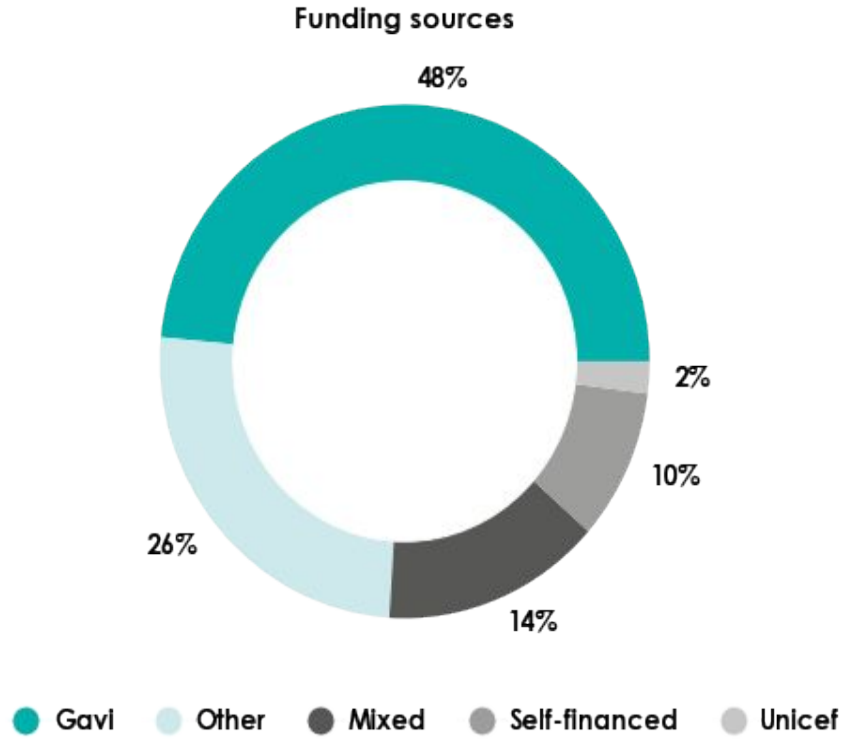
On contrast, Burkina Faso is a small country but has indeed made a good effort.

Expenditure and funding sources for immunization programs, 2016-19

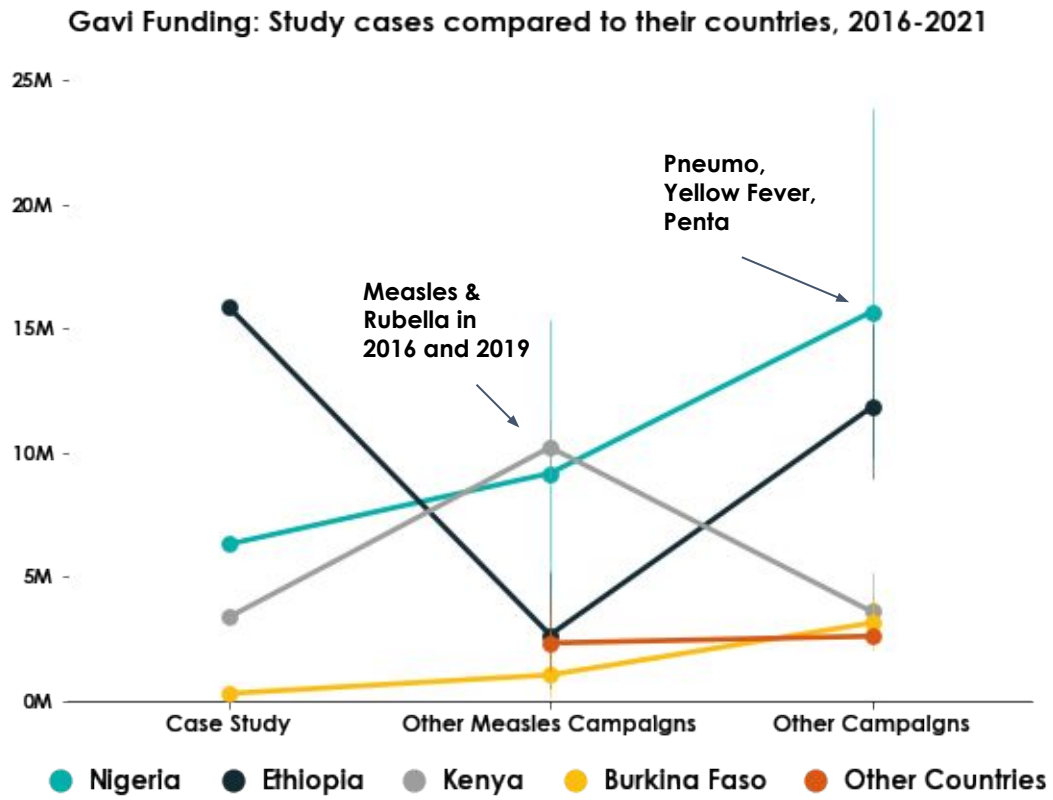
Left figure shows total expenditure between 2016 and 2019, and **domestic expenditure, shown as Government and Private, represents 69%** while external expenditure only represents 31% of total expenditure.

For campaigns that reported funding source in CCD, right figure shows that **Gavi represents 48% as the main funder** of campaigns. Since there is not an all-in-one source for domestic expenditure disaggregated by country or disease, **Gavi commitments is the closest proxy** we have to understand estimations around spending for different types of interventions, as shown in the next slide.





Gavi committed more funds than average for Ethiopia case study



* "Other countries" refers to 68 countries reported in GAVI commitments.

The campaign from Ethiopia required more money than similar measles or even other campaigns, while **Nigeria, Kenya and Burkina Faso** allocated less.

Nigeria, Ethiopia and Kenya allocated more money than the average funding for other types of campaigns in other countries.

Kenya had two major follow-up campaigns in 2016 and 2019 for measles and rubella while the 2021 campaign seemed to target half the regions (22 instead of 47 as in 2016), resulting in less expenses for delivery costs.

How to read the chart: The figure shows amounts of funds committed to campaigns using points as an estimation of the central tendency and error estimates around that point (vertical thin lines). This type of plot allows easier comparisons between categories of campaigns and differences within the focus countries by looking at the lines slope.

02 Use case map: **Kenya**

Campaign description (KE)

In 2021, Kenya fielded a catch-up campaign for measles and rubella to restore the target immunization rate of 95 percent among children under age 5. This catch-up campaign lasted ten days, 25 June - 5 July 2021 and occurred in 22 of Kenya's 47 counties with the lowest rates of coverage among the target population. The target population, ages 9-59 months, included some 4 million individuals.

The campaign was a joint effort between the Ministry of Health (Government of Kenya); bilateral donors, notably the CDC (U.S.); and international organizations, including United Nations Children's Fund (UNICEF) and the World Health Organization (WHO). More than 16,000 workers were dispatched to 5,000 vaccination sites, such as health clinics, preschools, marketplaces, churches, and other designated locations, with awareness campaigns and a mass text message campaign to promote uptake.

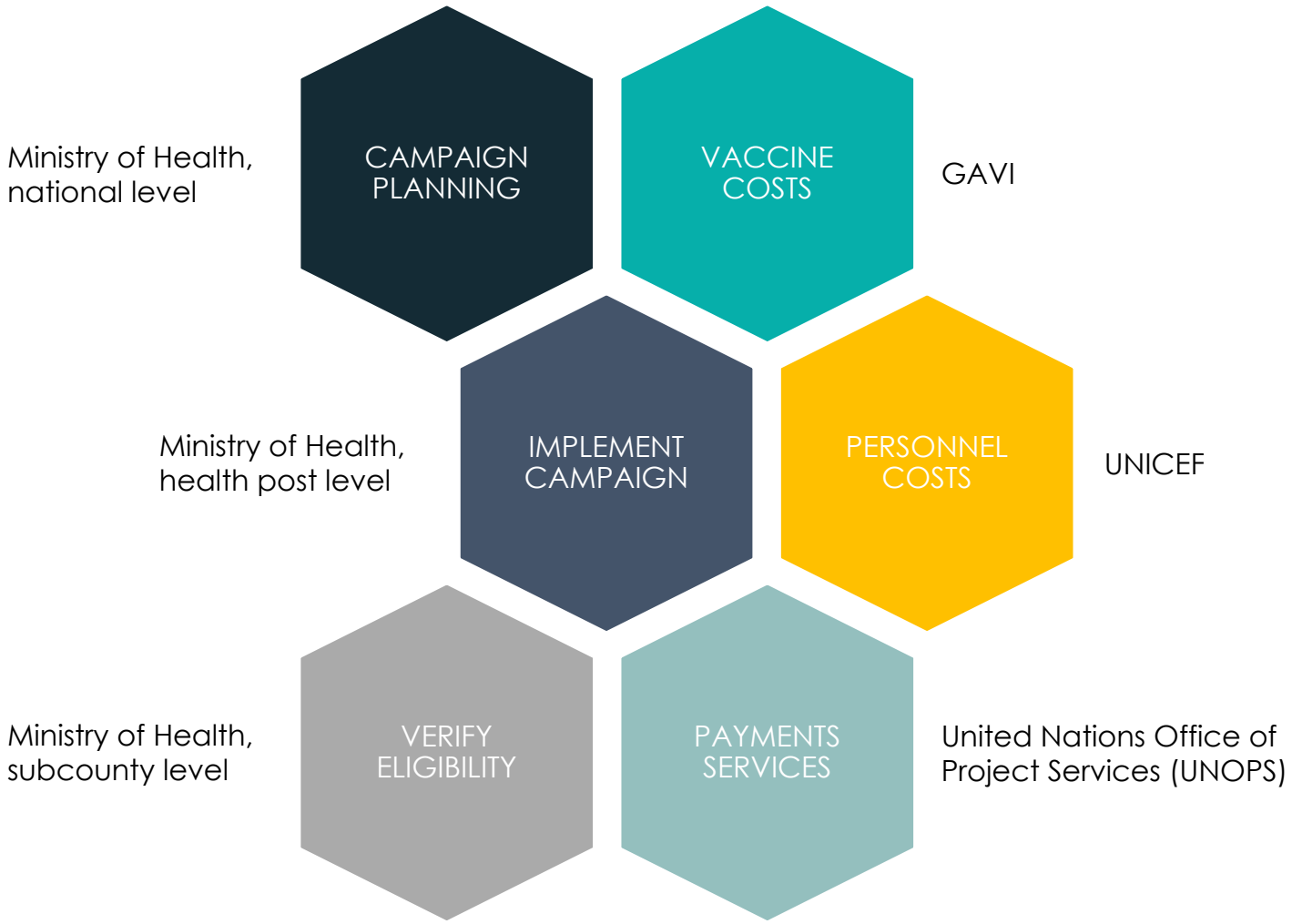
Gavi, also known as the Vaccine Alliance, was the main funder of the campaign, with supporting funds provided by the Centers for Disease Control and Prevention (CDC) (Government of the United States). Funding from these donors is passed through UNICEF, who in turn utilize the United Nations Office for Project Services (UNOPS) for financial operations.

The Ministry of Health planned the vaccine campaign and budget at the national level, allocating funds and assigning personnel to the county offices. The payments to healthcare workers that are the focus of this study fall under total operational costs, which the CDC funded at a total of USD1.8 million.

Timeline. The preparatory phase of the campaign includes training, microplanning, printing, and community engagement. The training phase occurs sequentially with nationally developed training materials, which are then used to train teams for counties, sub-counties, and health posts. The microplanning team calculates the population for each health post and the required logistics for vaccines and cold storage.

Healthcare workers are not involved in the printing of materials for the campaign. However, the campaign may need to cover the cost of travel and attendance for community leaders at in-person events, television, and radio campaigns. The campaign proper includes ten days of work, of which seven are the scheduled immunization campaign and three are "mopping up" any gaps or excess demand that could not be served on the scheduled seven days.

Key activities and responsible stakeholders



Campaign planning	Set national targets for the campaign. Review microplans and budgets produced by health post and subcounty.
Vaccine costs	Finance the procurement of vaccine doses and associated logistics that are required for the campaign.
Implement campaign	Train personnel. Delegate roles. Select sites. Confirm participation. Submit reports to county including payment lists.
Personnel costs	Provide funds for allowances for travel and accommodation to UNOPS — not the Ministry of Health. (Salaries are covered by the national and county governments.)
Verify eligibility	All health personnel and volunteers are verified at the health post and at the Sub County Level. Payees must be registered to be eligible for disbursement.
Payments services	Disburse payments of allowances via mobile money on behalf of UNICEF. Handles and resolves issues related to delay, non receipt of payments.

Community health workers in Kenya

Vaccine teams include community health workers as well as skilled health workers (see box at right). They rely on services from operations and logistics teams.

DUTIES OF COMMUNITY HEALTH WORKERS

- Identify target populations in the catchment area.
- Prepare a list of assigned households with lists of infants and mothers.
- Share lists of names with health workers to include in vaccination registers.
- Make home visits to encourage participation in fixed and outreach sessions.
- Help mothers to interpret immunization cards.
- Cooperate with the health worker to keep track of infants and mothers who need to complete the immunization series.
- Follow up on defaulters.
- Provide information on the session dates and times and vaccination schedules.

Source: Ministry of Health

Payment processes in detail (KE)

Phase 1: Microplanning. Each sub-county that will participate in the campaign estimates the number of days and personnel that will be required to attain the desired coverage level of immunization. Budgets are submitted by the sub-county to the county and the national level, where they are aggregated into a national budget. Health posts recruit personnel, subject to the approval of the sub-county office.

Phase 2a: Training. Healthcare workers are enrolled in the campaign by verbal commitment at the health post. Trainees sign an attendance form and submit payment credentials in expectation of allowances to be paid by mobile money.

Team leaders and supervisors for each immunization team are designated at this stage.

Phase 2b: Campaign. All health personnel in the campaign are expected to confirm daily participation. Daily movement forms and route plans are collected. Supervisors capture GPS location data for each team on a daily basis.

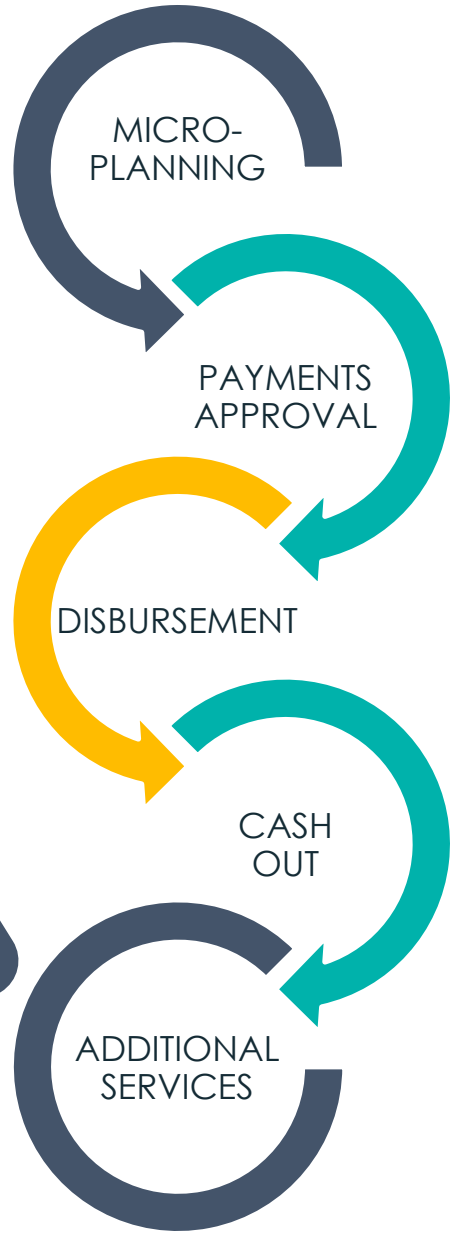
Supervisors submit payment forms (on paper) to the sub-county office detailing individual allowances to be paid, which are matched to existing participant lists.

Phase 3: Disbursement. UNOPS accepts the payment lists provided by the sub-county for disbursement of allowances by mobile money. Processing times typically last 2-14 days from when the supervisor submits the paper form. UNOPS reimburses the allowances plus a transfer fee for M-PESA balances (e.g., KES102 for a transfer of KES20,000).

Phase 4: Cash out. Mobile money may be spent or withdrawn in cash. In rural zones, cashing out M-PESA balances is time-consuming and expensive. Agent withdrawals cost more than transfer fees (e.g., KES180 on a withdrawal of KES20,000); and ATM withdrawals carry a higher tariff (KES197 on a withdrawal of KES20,000).

Phase 5a: Customer service. The success of these payments is dependent on the accuracy of the credentials provided by the field supervisor and approved by the sub-county office. Payment forms with erroneous credentials must be corrected. Changes in personnel can sometimes result in UNOPS sending allowances to the originally registered personnel, rather than the worker that attended the campaign.

Phase 5b: Disposition of funds. UNOPS must presumably report on the disposition of funds. To date, we have not been able to obtain interviews with UNOPS personnel to validate how this is done.



Timeline (KE)

Microplanning

Each health post submits a budget to the sub-county and recruits personnel.

Training

Trainees are registered with the sub-county. Supervisors are designated.

Allowances are provided for training (see "Disbursement").

Duration: 3 days

Campaign

Supervisors submit daily reports with attendance and location data.

Payment forms are submitted to the sub-county office and checked against the list of verified participants; then sent on to UNOPS.

Duration: 10 days

Disbursement

UNOPS disburses funds by M-PESA upon receipt of duly approved payment forms.

Processing: 2-14 days.

Cash-out

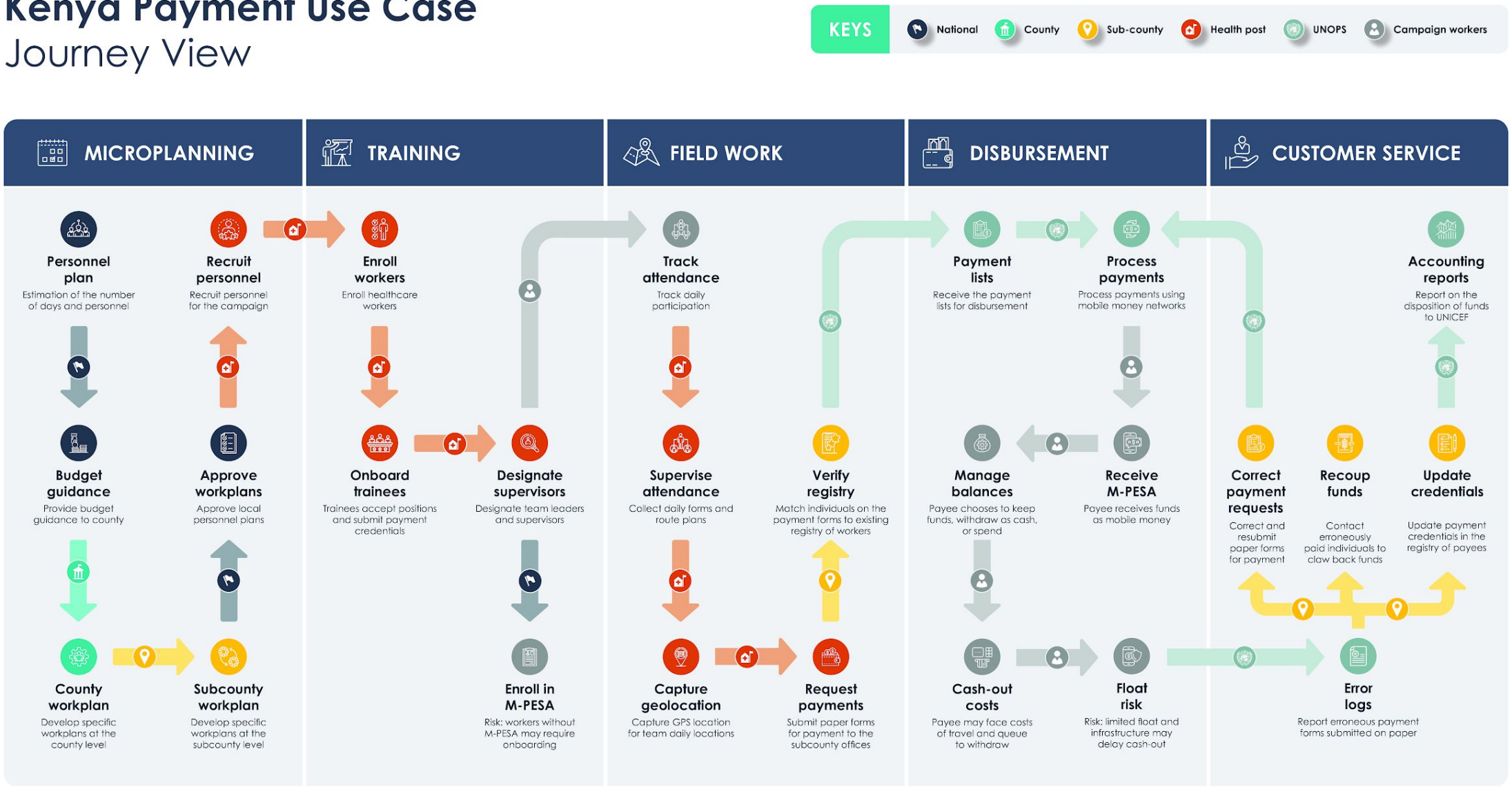
In rural locations, recipients are more likely to cash out the value of allowances.

The value of funds transferred is equal to the allowance due plus a transfer fee for M-PESA.

Cashing out costs more than transferring funds.

Rural zones may have a shortage of agents and ATMs with sufficient float to cash out.

Kenya Payment Use Case
Journey View



Activity	Description
Personnel plan	The national health ministry estimates the staff days required to execute the campaign based on the population to be covered and the type of vaccine.
Budget guidance	National budget guidance is issued by the health ministry to county offices with instructions for planning.
County workplan	Counties write workplans that include specific allocations for the allowances paid to frontline workers.
Subcounty workplan	Subcounties write workplans that include specific allocations for the allowances paid to frontline workers.
Approve workplans	The national health ministry integrates and approves county and subcounty workplans.
Recruit personnel	Health posts conduct their own recruitment of workers, including permanent staff and temporary workers. Each worker's allowances are calculated based on the location of work.
Enroll workers	Workers are enrolled during the training phase. They accept their position for a specific job and location.
Onboard trainees	Trainees must submit payment credentials as part of their enrollment process.
Designate supervisors	Supervisors receive additional allowances. They report daily location and attendance of each team.
Enroll in M-PESA	Some workers may not already have an M-PESA account, in which case they would need to obtain an account to receive allowances digitally.
Track attendance	Team supervisors record attendance on paper forms. Forms are submitted to the health post.
Supervise attendance	Health posts track attendance for each member of the team at their appointed work locations.
Capture geolocation	Geolocation data is used to validate the presence of workers in the correct location for the campaign.

Activity	Description
Request payments	Health posts submit requests for payment that detail the individuals, amounts, and their payment details.
Verify registry	Payment details are checked against the registry to minimize errors in the disbursement process.
Payment lists	UNOPS collects and consolidates the lists of payment requests from subcounties and prepares a global list of payees.
Process payments	UNOPS processes mobile payments using a specific sub-account that authorizes disbursements to M-PESA accounts.
Receive M-PESA	Recipients receive M-PESA balances for their allowances on a mobile phone.
Manage balances	Recipients decide whether and when to cash out balances that are received as M-PESA.
Cash-out costs	Cash-out transactions may occur once, more than once, or not at all.
Float risk	In some locations, a dearth of cash-out agents may impede timely cash-out transactions.
Error logs	UNOPS reports erroneous payment transactions back to the subcounty office.
Correct payment requests	Subcounty offices must correct payment credentials and resubmit payment requests.
Recoup funds	Clawing back funds erroneously paid is the responsibility of subcounty offices.
Update credentials	Payment details must be updated when names or account numbers are changed.
Accounting reports	UNOPS conducts accounting for payments on behalf of UNICEF and manages balances in the appropriate accounts.

Recipient's perspective

Recipients face three main costs in receiving payments: fees, transit, and queue time.

These costs vary with the method of payment offered. Part of the variance is due to payments infrastructure: the availability of cash access points and the acceptance of digital payments.

User behavior is also a determinant of the recipient's costs. Do recipients convert digital payments to cash all at once, in several smaller transactions, or not at all?

In the aggregate, recipients' costs depend on how many users intend to cash out digital payments.

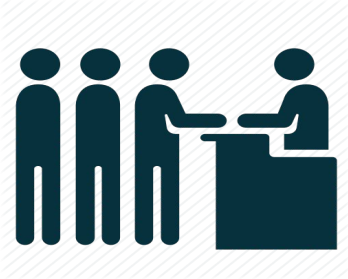
	Case 1: Cash payments	Case 2: M-PESA, immediate cash-out	Case 3: M-PESA, multiple cash-out	Case 4: M-PESA, fully digital spend cycle
Definition	Cash is paid directly to the recipient.	Recipients cash out each disbursement immediately.	Recipients take several withdrawals to minimize the cash that they carry.	Recipients spend payments as digital value.
Tariffs	Presumably zero.	User pays the tariff for a single cash-out transaction.	User pays the tariffs for several smaller cash-out transactions.	User pays the tariffs for purchases and transfers; but nothing to receive the funds.
Transit	Incurred when disbursement occurs after the campaign concludes.	Varies with the distance to a mobile money agent (with sufficient float).	Varies with the distance to a mobile money agent (with sufficient float).	Presumably zero.
Queue	Time spent queuing for disbursement.	Time spent queuing for withdrawal.	Time spent queuing for withdrawal.	Presumably zero.

Case 1: Cash Payments

Cash total due for payments is dispatched from UNOPS bank account via CIT services which include:

- Bulk cash collection
- Bulk cash payments
- Cash counting

- Cash is dispatched via cash-in-transit (CIT) to far-flung areas normally reachable within a day
- Can take a few hours to several hours to collect, deliver, and pay out cash to health workers
- Dispatch must be completed within banking hours (8am - 5pm) for security reasons.



- Workers are paid the dues via cash on location
- Queue time depends on number of workers and processing time for each payment
- Processing time may depend on the availability of required documents e.g. KYC proof

Drivers

- Lack of digital payments distribution in the location where payments are being made, therefore cash payments make more sense
- Distance and remoteness of the area where digital services are being offered
- Number of registered mobile money users may be too low hence cash payments

- Yet, UNOPS cites multiple problems with cash delivery.
  - Higher cost of cash delivery to far-flung payment locations.
  - Staffing burden of cash distribution and risk if robbery whilst cash is in transit.
  - Staff bear the accountability risk for cash in transit.
  - Poor verification of recipients. No independent confirmation of the recipient's identity, making it impossible to separate the disbursement and control functions.

After receiving cash, the health workers may:

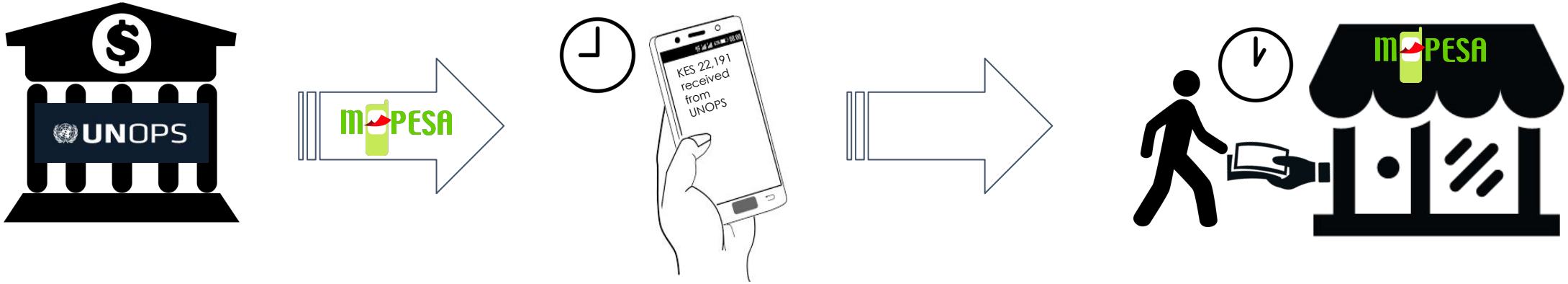
- deposit the cash at M-PESA outlet or bank

- buy food using cash whilst on campaign

- buy grocery or personal items

- pay for services like transport, entertainment, hospital etc

Case 2: M-PESA payment and immediate cash-out



- UNOPS makes a deposit to the bank for total amount they want to pay out in bulk for the health workers
- Bulk payment is initiated by via M-PESA B2C system operated by UNOPS
- Charges at KES 22.40 per transaction for all values over KES 1,000 paid to M-PESA by UNOPS
- Depending on the amount, the cash out cost for a single transaction can be added to the total e.g. if KES 22,000 is being disbursed, then the cost will be KES 213.40 (22.40 + 191)

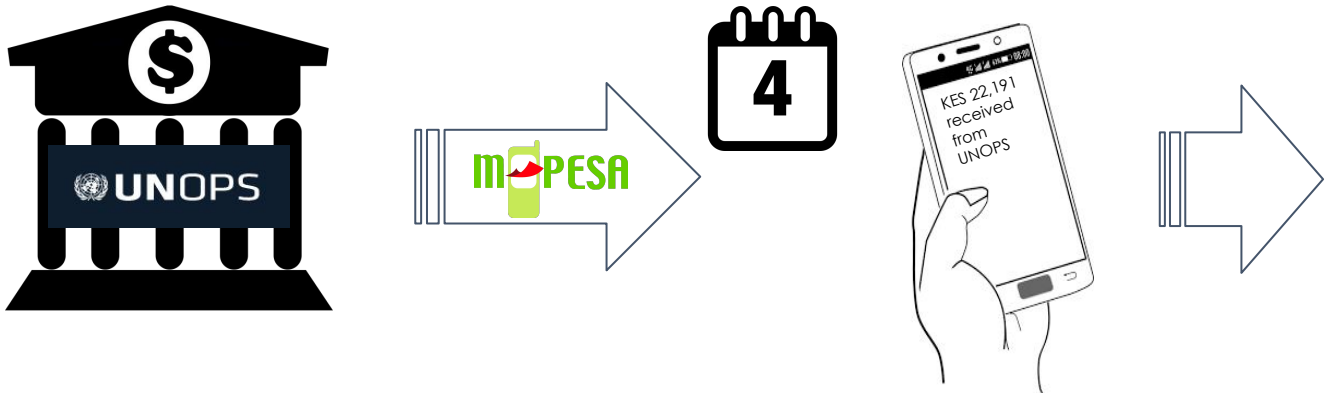
The health worker will receive KES 22,191 which includes the total amount plus cash out cost

The recipient can now cash out the exact amount without losing to the cost of cashing out.

Drivers

- Lack of digital payments distribution in the location where payments are being made, therefore one cash out makes more sense as the recipient will now have the freedom to spend in cash which is more acceptable
- Long distance and remoteness of the vaccination centre: In such cases, using M-PESA makes little financial sense to the recipient health worker due to cost and other inconveniences e.g. lack of electricity to charge phone, no network coverage, too costly and time consuming to travel to the nearest agent (can take 1 hour to 1 day, costing between KES 50 and 1,000
- Multiple cash out may also be expensive if considering time and cost of travel and cash out charges
- When there are no cash-out points or low liquidity, people tend to:
    - Send money to another party (mostly relative) in a different location e.g. health worker in remote area sends money to their spouse back at home in an urban area
    - Remote payments
    - Remote cash out
    - Store value in wallet till later
    - Buy airtime

Case 3: M-PESA payment and multiple cash-out

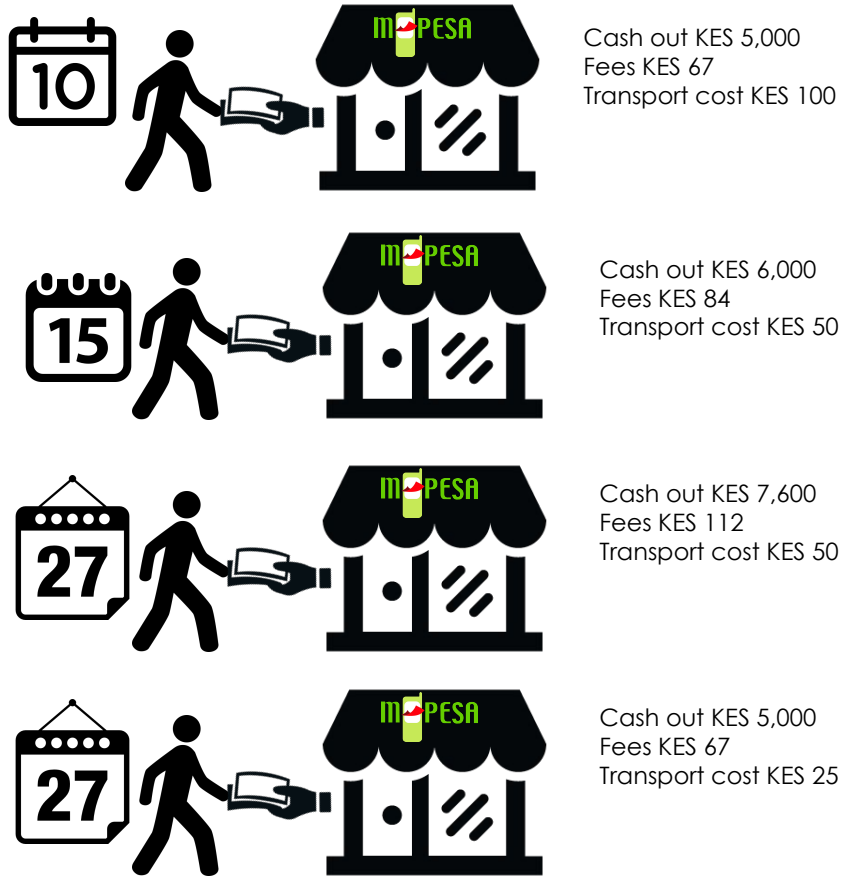


UNOPS transfers funds from a project account into a specific account for a designated group of health workers. Finance personnel then disburse funds into M-PESA via a payment gateway.

UNOPS incurs charges KES 22.40 per transaction for all values over KES 1,000 on M-PESA.

How much will a recipient incur in cash-out costs? That depends on user behaviors. We illustrate how different behaviors and points of access to cash can affect fees and transportation costs.

The health worker will receive KES 22,191 which includes the total amount plus cash out cost



Total cash out	KES 22,000
Total fees	KES 330
*Total transport cost	KES 225
**Total additional out of pocket costs	KES 364

Drivers

- Where the cost of cash out supersedes the risk of losing cash, recipients may opt to use mobile money to store value for later usage for the security it offers.
- It would be good for UNOPS to consider including the cost of multiple cash out, assuming an average number of cash outs, and adding that cost to the paid amount. The cost of travel can also be considered especially for far-flung areas with poor agent distribution as well as poor and costly transportation
- Including these costs does not change the B2C transaction cost, but cushions customers against possible loses if they did multiple cash out transactions

*Assumes M-PESA agents are a distance away at the time the cash out is needed
**Additional cost of KES 139 from multiple cash out + total transport

Exhibit: M-PESA Tariffs, 2021

M-PESA TARIFF EFFECTIVE 1ST JANUARY 2021

TRANSACTION RANGE (KSHS)		TRANSACTION TYPE AND CUSTOMER CHARGES (KSHS)			
MIN	MAX	TRANSFER TO M-PESA USERS, POCHI LA BIASHARA AND BUSINESS TILL TO CUSTOMER	TRANSFER TO OTHER REGISTERED MOBILE MONEY US-ERS	TRANSFER TO UNREGISTERED USERS	WITHDRAWAL FROM M-PESA AGENT
1	49	Free	Free	N/A	N/A
50	100	Free	Free	N/A	10
101	500	6	6	45	27
501	1,000	12	12	49	28
1,001	1,500	22	22	59	28
1,501	2,500	32	32	74	28
2,501	3,500	51	51	112	50
3,501	5,000	55	55	135	67
5,001	7,500	75	75	166	84
7,501	10,000	87	87	205	112
10,001	15,000	97	97	265	162
15,001	20,000	102	102	288	180
20,001	35,000	105	105	309	191
35,001	50,000	105	105	N/A	270
50,001	150,000	105	105	N/A	300

MAXIMUM AMOUNT CUSTOMER CAN TRANSACT DAILY	MAXIMUM AMOUNT CUSTOMER CAN HOLD IN M-PESA
300,000	300,000

ATM WITHDRAWAL		
TRANSACTION RANGE (KSHS)		CUSTOMER CHARGE (KSHS)
MIN	MAX	
200	2,500	34
2,501	5,000	67
5,001	10,000	112
10,001	20,000	197

OTHER TRANSACTIONS	KSHS
ALL DEPOSITS	FREE
M-PESA REGISTRATION	FREE
BUYING AIRTIME THROUGH M-PESA	FREE
M-PESA BALANCE ENQUIRY	FREE
CHANGE M-PESA PIN	FREE

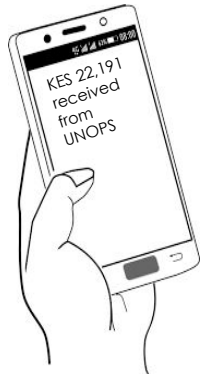
- Download mySafaricom App and transact on M-PESA
- Dial *334# to access all M-PESA services

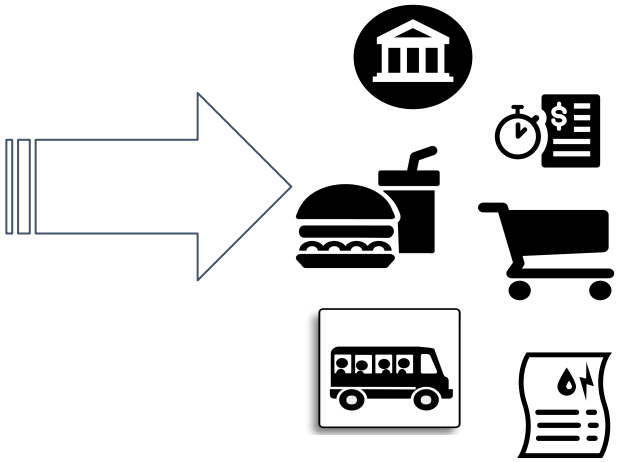
Drivers to single cash out:

- **Non Uniform Cost**: Cash out cost for lower value transactions range between 1.20% and 20%, with lower value transaction costing higher in terms of percentage of the transaction.
- **Complex structure**: For some transaction bands, the change in cost of transaction is almost double when moving to the next band e.g. it costs KES 22 more to send KES 2,500 than to send KES 2,501 which may be confusing to customers
- Cost **discourages split cash out** transactions: cashing out KES 1,000 fifteen times would cost KES 405 compared to one cash out of KES 15,000 (costs KES 162)

Source: M-PESA Tariffs

Case 4: M-PESA payment and digital spend cycle





- UNOPS makes a deposit to the bank for total amount they want to pay out in bulk for the health workers
- Bulk payment is initiated by via M-PESA B2C system operated by UNOPS
- Charges at KES 22.40 per transaction for all values over KES 1,000, paid directly to M-PESA
- The payers can determine the average cost of transactions based on assumptions of possible customer behaviours once they receive money. Some scenarios are included here

The health worker will receive KES 22,191 which includes the total amount plus cash out cost

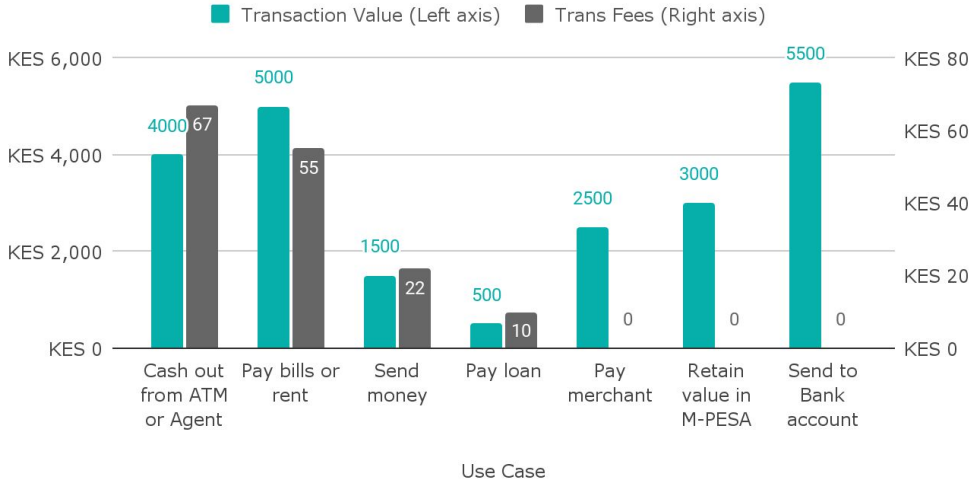
Example of how the money in the wallet could be used:

- Buy airtime
- Pay utility bills
- Pay merchant
- Send money
- Pay loan
- Store value in M-PESA
- Cash out: ATM/Agent
- Send to Bank account

Drivers

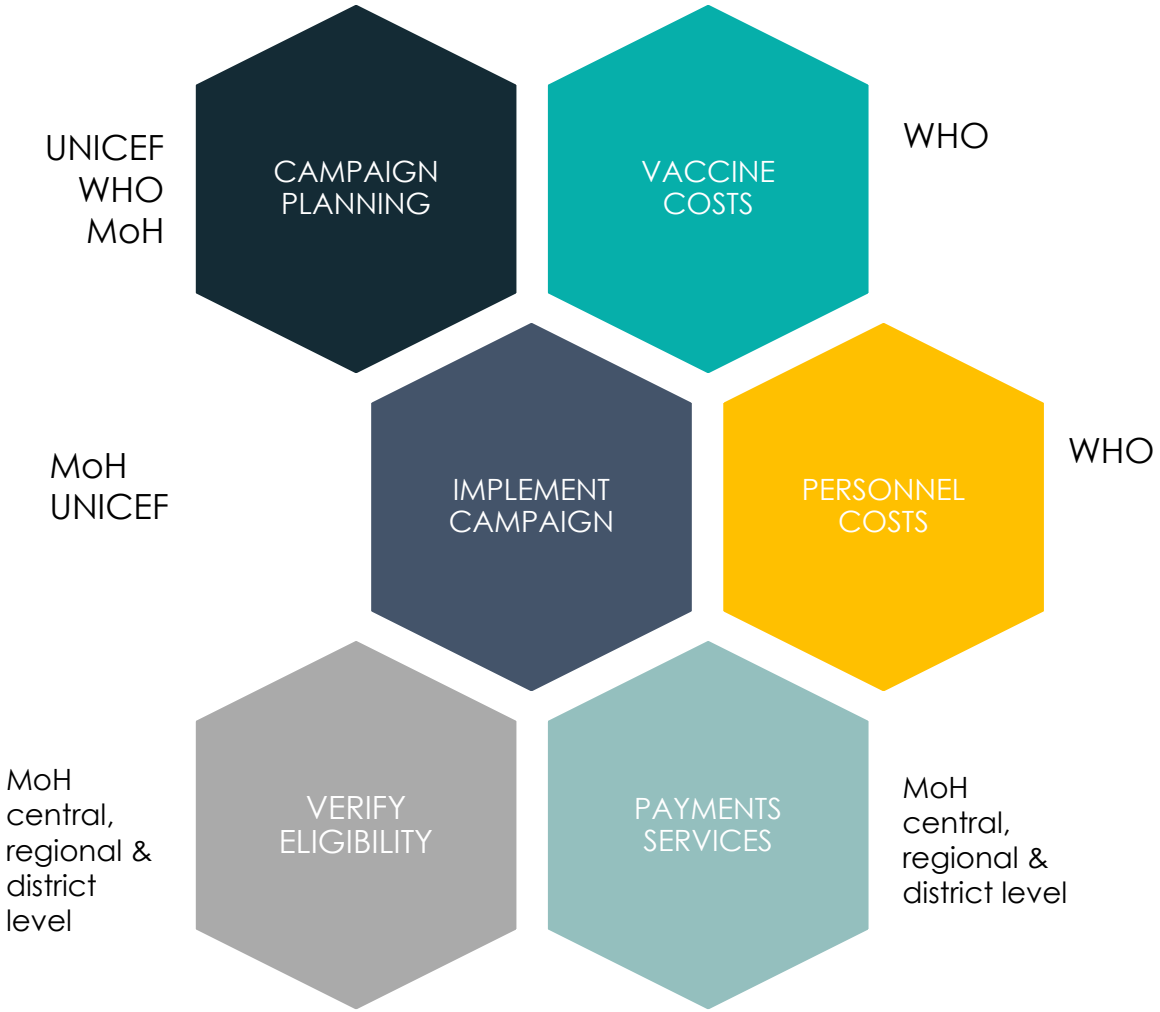
- Users are more likely to use mobile money where services that accept mobile money payment are available
- Other requirements to support the usage i.e. agent network, banks, good electricity supply and mobile network, which would mostly be present in urban areas.
- Heavy users of the full digital cycle would most likely be also tech savvy, youthful, busy and having multiple transactions to do monthly, so preferring remote transactions
- There are more gains for cash out fees, which are priced higher to encourage more usage within the ecosystem to send money, make payments and store value for later use. This assures downstream revenue, even if it is deferred.

Example: Transaction Value and Fees



03 Use case map: **Burkina Faso**

Key activities and responsible stakeholders



Campaign planning	Centralized planning falls under the Expanded Vaccination Program (PEV) department: directive, quantity, budget,type of campaign, communication.
Vaccine costs	With MoH, pharmacy facilitates the procurement of vaccines doses and associated logistics that are required for the campaign. Still require the budgets to assess what part of the budget is directly managed by MoH.
Implement campaign	Ministry of Health participates at all levels: central, regional, and district level. Pharmacy manages procurement, storage, and distribution.
Personnel costs	Per diem paid for personnel involved at all level. WHO provides funds for all allowances and travel personnel. Funds are provided to the Ministry of Health, who distribute the funds to recipients.
Verify eligibility	All health personnel and volunteers are verified at the health post. Vaccine teams include both community workers and health workers. Payees must be registered to be eligible for disbursement.
Payments services	Disburse payments of allowances via cash health posts. Issues related to delay or non-receipt of payments are resolved on the level of the health post or district.

Campaign description

After being the first country in Africa where the measles vaccine was used in mass campaigns, Burkina Faso in 1984 vaccinated children aged 9 months to 6 years against this disease with the "Commando" vaccination.

The last campaign that has been captured in the media refers to a reactive measles vaccination campaign that took place in 2018 across the country. This campaign included twenty-six (26) health districts spread over twelve (12) Regions out of the thirteen (13) in the country. In total, 1,198,270 children, or 42% of children under five (05) years old, have been targeted by this campaign. To achieve the intended target, fixed and advanced strategies have been implemented, with special access to difficult-to-access areas and farming hamlets.

Burkina Faso recorded, during the first half of 2018, 3,741 suspected cases of measles with 09 deaths. It is to deal with this epidemiological situation that the 2018 measles vaccination campaign has been held.
With regards to vaccination campaigns in Burkina Faso more generally speaking, it is important to note that Burkina Faso celebrated 40 years of its Expanded Program on Immunization (EPI) in April 2021. Thanks to the combined efforts of the Global Alliance for Vaccines and Immunization (GAVI), the World Health Organization (WHO), the United Nations Children's Fund (UNICEF) and other partners In support of the Ministry of Health, through the Direction de la Prévention par la Vaccination (DPV), Burkina Faso has maintained for several years a satisfactory rate of routine vaccination coverage for most antigens to protect against fatal diseases. Each year, around two to three million deaths from diseases such as measles, diphtheria, tetanus, whooping cough and hepatitis are prevented. Between 2010 and 2018, the measles vaccine alone prevented 23 million deaths worldwide.

Since its launch in 1974 by the international community, under the aegis of WHO, the EPI has been the most cost-effective health intervention. It has saved millions of lives. In Burkina Faso, it is estimated that with around 30,000 FCFA ($ 58) a 2-year-old child is vaccinated against 11 diseases.

In recent decades, vaccination has helped eradicate and reduce the most deadly diseases for children in Burkina Faso. The incidence of measles has increased from 50,000 cases per year to around 2,500 cases and morbidity and mortality due to diphtheria, pertussis, rotaviruses, invasive bacterial infections such as pneumonia or meningococcal meningitis have drastically reduced. Burkina Faso has fallen from 1.2 million hospitalizations in 2013 due to pneumococcal pneumonia to around 125,000 in 2020.

However, there are great geographic disparities. The Sahel region, which is particularly affected by armed violence, has the lowest coverage rates, with only four in 10 children (47 percent) vaccinated against nine in 10 (90 percent) nationally.

Burkina Faso regularly records epidemics, particularly of polio, measles and meningitis in regions that are often difficult to access. With the support of its partners, the Ministry of Health is leading response campaigns to bring these epidemics under control and to align with the global goals of polio eradication and measles control.
From 6 antigens in 1980, the country has grown to 15 in 2021 covering the most deadly diseases in children and pregnant women.

Payment processes in detail (BF)

Phase 1: Planning. Central level will define the conditions and budget of the campaign and get it approved by the financial partners. Number of days, communication, per diem per category of worker is established during the budget planning. Once the budget is approved it will be communicated to the regions, then districts, then health posts. Recruitment will then start. Some Funds necessary to implement will be disbursed (per diem of the personnel travelling)

Phase 2a: Training. Healthcare workers are enrolled in the campaign at the health post. Trainees sign an attendance form and submit payment credentials in expectation of allowances to be paid in full by cash at the end of the campaign. Team leaders and supervisors for each immunization team are designated at this stage. If they travel outside of the region or district, they get their per diem at the beginning of the campaign

Phase 2b: Campaign.

All health and non health personnel in the campaign are expected to confirm daily participation. Daily signing sheet are collected and kept at the health post level.

For personnel sitting at the regional and central level, they are also expected to sign a presence sheet.

Phase 3: Disbursement of the funds and payment of the personnel

The central level received the funds from the financial partners. The funds are sent from the central level to the regions via bank transfer or cheque. The regions send the funds to the district via cheque. The district will cash out the funds and disburse it to the supervisors of the health posts (chief nurse). The funds are being disbursed during the campaign but they experience numerous delays quite often (management, network issue. At the end of the campaign, personnel come physically to the health posts to receive cash payment. Supervisors(Nurse) submit signing sheet justifying presence as well as reception of payment (on paper) to the district office detailing individual allowances that have been paid.

Phase 5a: Reporting from health posts to central level

Each districts compiles the reports received by their health posts. They then report to the regions which report to the central level. The reporting consist in: budget comparison statement + activity report + proof of presence and payment. If excess of funds it will be sent back as it was received (transfer or cheque)

Phase 5b: Reporting from national level to financial partners

The central level compiles the reports received by their regions before reporting to the financial partners. The reporting consist in: budget comparison statement + activity report + proof of presence and payment. If excess of funds it will be sent back as it was received (transfer or cheque)

Burkina Faso Payment Use Case
Journey View

Activity	Description
Define budget	The national health ministry defines the budget for the campaign depending on the type of campaign, target population, and geography.
Allocate workdays	Calculate the number of workdays available to each region and each locality for each category of worker in the campaign.
Advance funds	Advance funds are provided for microplanning purposes, before local budgets are approved.
Approve budget	At every level — regional, district, and health posts — offices communicate that they have received and approved budgets from the national office.
Begin recruitment	At every level — regional, district, and health posts — offices recruit workers for the campaign. Allowances are calculated based on the location of work.
Enroll workers	Workers are enrolled prior to the the training phasefor a specific job and location. Both permanent and temporary staff may be used for unskilled as well as skilled health workers.
Attendance sheets (training)	Trainees sign attendance forms during training phase and submit payment credentials.
Assign supervisors	Supervisors are designated from each team to manage the operations of each team. One of their responsibilities is to report attendance and location of each team.
Distribute per diem	At the training phase, team leaders receive advance per diem if they are relocated to attend the training.
Attendance sheets (field work)	Supervisors of each field team record the attendance of each member of the team on a paper form and the location of each team.

Activity	Description
Supervise attendance	At the health post level, daily attendance sheets and route plans are collected and synthesized. Attendance data are synthesized and passed on to the district, region, and central offices.
Receive funds	The central office receives funds from financial partners that is intended to support allowances to healthcare workers.
Distribute funds	Funds are sent by bank transfer from the central office to regions. Regions typically distribute funds to district offices by cheque.
Withdrawal	District offices make cash withdrawals for disbursement of allowances.
Cash delivery	Cash is delivered to distribution points. Cash must be secured in transit, requiring armed personnel to deliver the cash to the point of distribution.
Disburse payments	Cash is distributed to workers after the completion of field work. In principle, these distribution points could coincide with field work, but in practice the cash deliveries can be delayed days or weeks.
Receive cash	Recipients may require a separate trip to the point where allowances are disbursed once the campaign has concluded.
Control disbursement	Health posts are expected to submit paper records of signatures from recipients once the cash has been disbursed.
Accounting and reporting	District offices compile records of budget, attendance, and disbursement for all personnel. Finance staff at the regional and central level report on attendance and disbursement.
Reconcile budget	The final phase of accounting is to reconcile expenses against the statement of expenses and the budget for the campaign.

04 Use case map: **Ethiopia**

Key activities and responsible stakeholders

Campaign planning	MoH sets plan for the vaccination campaign. Review micro plans and budgets produced by the Sub-city, Zones and Woredas. Approved by Regional govts.
Vaccine costs	Finance the procurement of vaccine doses and associated logistics that are required for the campaign.
Implement campaign	Train personnel. Delegate roles. Select sites. Confirm participation. Record attendance. Submit reports to Regional Health Office.
Personnel costs	Costs for training, Covid - 19 PPE's, transportation, logistics.
Verify eligibility	Health personnel and volunteers are selected by the health center directors and monitored by supervisors.
Payments services	Payments are disbursed by established per diems via cash in Woredas for Regions. In Addis Ababa, payments disbursed by Sub City Finance via bank transfers.

Campaign description

Ethiopia was the first large country to carry out the measles vaccination in 2020 during the Covid-19 pandemic. Gavi and the Centers for Disease Control and Prevention's (CDC) Center for Global Health (CGH) provided the main technical and financial assistance. Other funding partners include the Irish Government, CHAI, WHO, Government of Sweden, and UNICEF.

The target vaccination age defined for the vaccination is for children aged between 9 to 59 months. The campaign met its desired population coverage of 95% threshold, considered as best practice to avoid future outbreaks.

The Funding bodies provided technical and financial assistance to ensure that:
- more than 6,300 additional health workers were mobilized to minimize crowding and increase physical distancing at vaccination posts;
- the campaign was extended for three additional days to decrease crowd size;
- and masks and hand sanitizer were provided to all campaign support staff.

Communication and social mobilization was done on a national level as well on the Woreda and local level. Messages from social mobilizers, religious and community leaders were enhanced five days before the vaccination begun.

The success of this campaign, which was implemented across all regions in Ethiopia owes to the rapid preparation and communication among all stakeholders.

MoH set out a national agenda for a Measles vaccine campaign in 2020 during the onset of Covid-19.

The EPI team for each Regional Health Office requested for microplanning to be done via a request letter sent through the Zones.

Zone then requested for Micro Planning to be completed by the Woreda Office.

In Addis Ababa, the directive will come from the MoH to Addis Ababa Health Bureau to the Sub-City Offices

The Woreda health and finance offices drew out a plan, and budget for the Measles vaccination campaign. Once complete, Woreda will send budget through the same channels all the way to the Regional Office.

Once budget is approved by the Regional Health Office/ Addis Ababa Health bureau, vaccine campaign begins.

Once campaign is complete, report is written by Woreda offices/ Sub-City Health office and sent through the same channels, this onsets the payment request.

Payment processes in detail: Addis Ababa

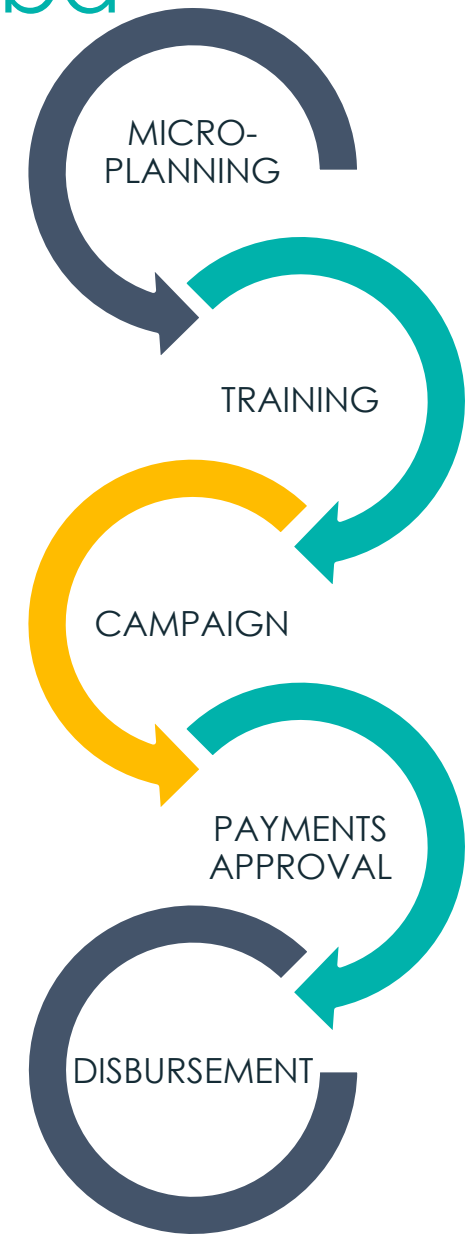
Phase 1: Microplanning - The Addis Ababa Health Bureau inform the (11) Sub cities in Addis Ababa of the upcoming vaccine campaign. Sub City works together with the Health Facilities within their Sub cities and work on a microplan, assess the who/what/where. Recruiting of the vaccine workers is done from the health facilities and only work with individuals who have vaccine campaign experience.

Phase 2: Training - Using the Supplemental Immunization Guide, the Addis Ababa Health Bureau provides orientation to the Sub City health office and then the Sub city provides training to health centers and orientation. This process also includes indicating the number of vaccine workers and is considered part of the pre-vaccine session. Per diem is paid at the place of training for vaccine workers.

Phase 3: Campaign - During the vaccine campaign, there is a team leader assigned to each campaign team and a supervisor from the Sub-City health office to manage 4-5 vaccine teams. Daily attendance is recorded and signed by the supervisors.

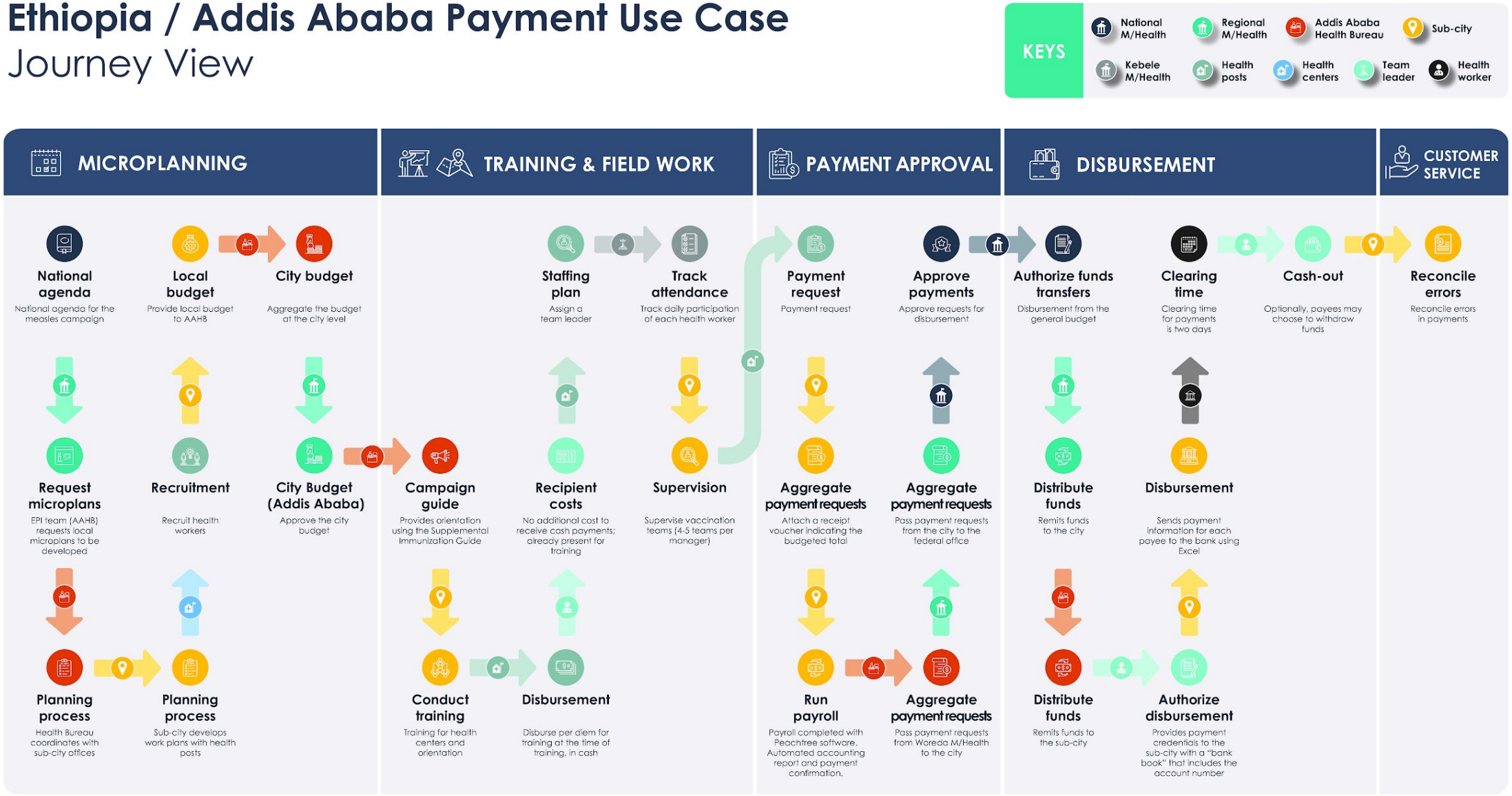
Phase 4: Payments Approval - The Sub-City Finance office receives a list of vaccine workers from all health facilities, together with a letter, attendance, signature and a stamp. Together with these items, Sub-city finance adds a Receipt Voucher indicating the amount in the budget and submits to the Addis Ababa Health Bureau. Funds are then deposited to the Sub city Finance account.

Phase 5: Disbursement: Once the vaccine campaign is complete, Sub-city finance office receives a payment request, once it is signed by the Sub city finance office signatories, payroll is completed via peachtree which will generate a report and a settlement of expenditure. Then sub-city finance office will send a letter to the Addis Ababa Health bureau and copy everyone who needs to be on the letter, additionally, Sub-city finance will send payee info: name, transfer amount and account number on excel to the bank via email and also send the bank a hard copy. Bank takes a day to complete transfers.



Ethiopia / Addis Ababa Payment Use Case

Journey View



Activity	Description
National agenda	The national health ministry estimates the staff days required to execute the campaign based on the population to be covered and the type of vaccine.
Request microplans	National health ministry (EPI) requests local offices to develop microplans.
Planning process	Health bureau coordinates the planning process with sub-city and health posts.
Recruitment	Health posts recruit workers for the campaign from permanent and temporary staff using both skilled and unskilled health workers.
Local budget	The sub-city localities report health budgets to the city of Addis Ababa.
City budget	Approves the budgets for all the sub-cities and reports the city budget to the national health ministry.
Campaign guide	The city creates a guide for the campaign that is distributed to the sub-cities and health posts.
Conduct training	Sub-cities conduct trainings for health posts located in each.
Disbursement (1)	Cash disbursement of allowances is used at the training phase of the campaign.
Recipient costs	Recipients do not incur costs to receive cash at training provided that the disbursements are made promptly and no additional time or travel is required.
Staffing plan	Assign a leader from each team who will be responsible for tracking attendance and other responsibilities.
Track attendance	Team leaders report daily attendance at the site where vaccinations are offered.

Activity	Description
Supervise campaign	Managers supervise 4-5 health teams in the campaign, all located within the sub-city.
Request payment	Health posts submit payment requests on behalf of the teams to the sub-city office.
Run payroll	Sub-city finance teams run payroll with Peachtree accounting software. Payment vouchers are attached at the sub-city level, indicating the budgeted total for each.
Aggregate requests	Payment requests are aggregated at the sub-city and city level, then forwarded to the federal office for approval.
Approve payments	The federal health ministry approves payments for disbursement
Authorize funds transfers	Funds are transferred to the health ministry from the general budget.
Distribute funds	The federal health ministry transfers funds to the city, who then provide funds to the sub-city.
Authorize disbursement	Team leaders provide payment credentials to the sub-city. Each individual provides the account number corresponding to their bank book, which is the account that takes payment.
Disbursement	The sub-city sends payment to the recipient's account.
Clearing time	Two days are required to clear payments from the sub-city to the recipient's account.
Cash out	Recipients may choose to withdraw the funds.
Reconcile errors	Errors to be reconciled are the responsibility of the sub-city that made payment.

Payment processes in detail: Oromia & Somalia Region

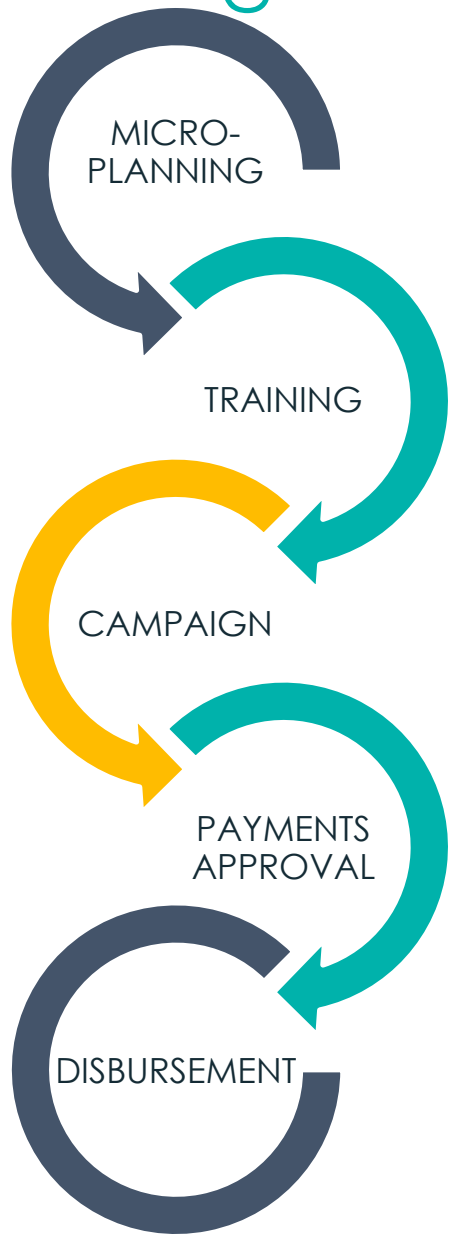
Phase 1: Microplanning - Ministry of Health begins the process by writing a letter indicating the need for the campaign, then EPI focal persons from the Regional office write to Zone and Town offices to prepare, who in turn write to Woredas in order to begin the budgeting and microplanning. Woredas have health facilities below them and key personnel come together and develop a microplan & budget. The Zones contact the Woreda and look through the microplan and when complete, present and send it to the Regional Health offices.

Phase 2: Training - At the Kebele level there are community volunteers, who are mobilized using the local languages, mobile phone campaigns. The current health workers are utilized especially from the Kebele level & the health extension workers are informed of the upcoming campaign by phone. There is pre and post orientation during a vaccine campaign.

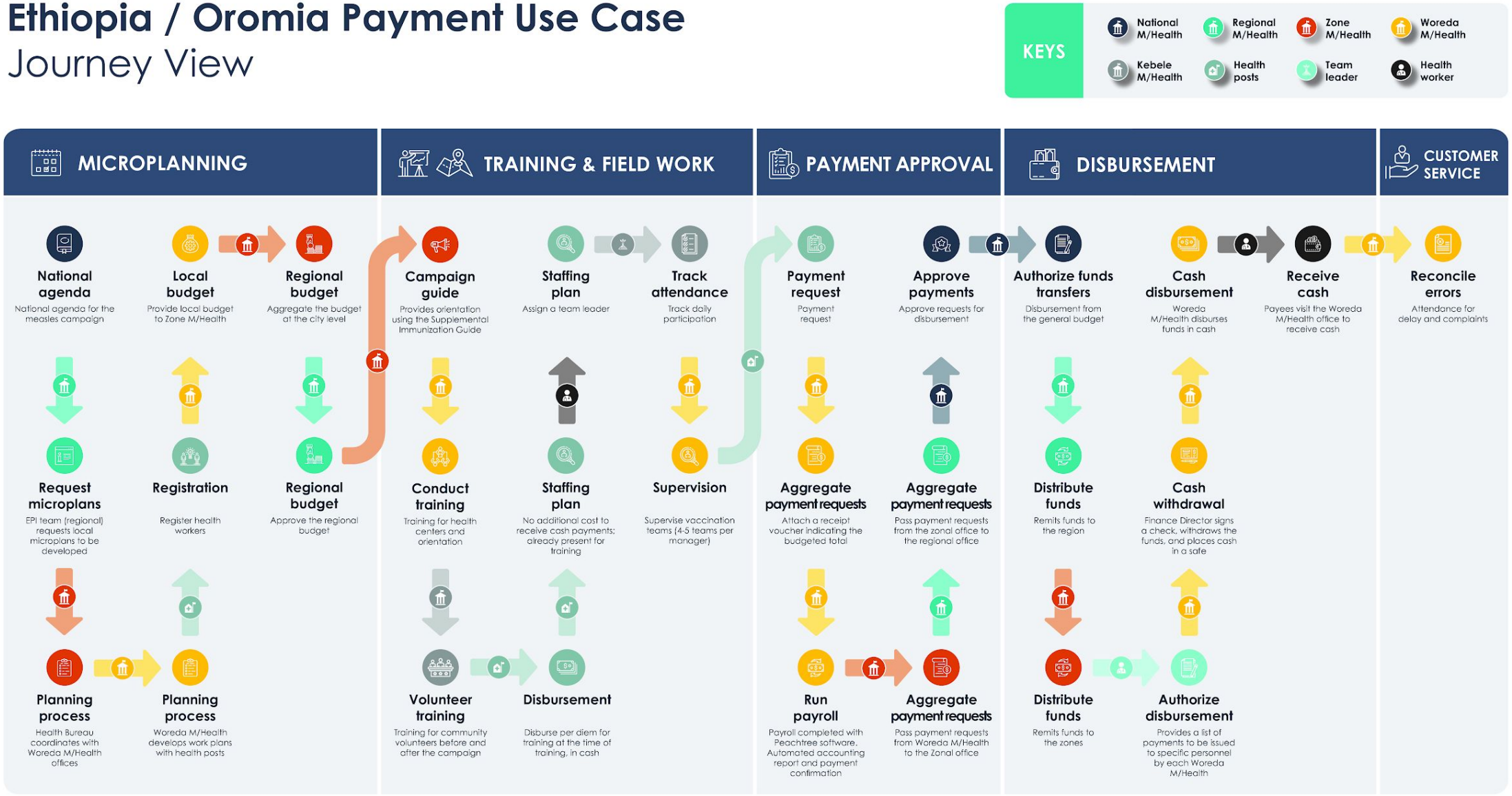
Phase 3: Campaign - During the vaccine campaign, there is a team leader for each vaccination team. Then there are supervisors; one supervisor for about four teams. In the bigger cities, there is one supervisor for five teams. Health centers and their management manages the team, specifically the EPI team acts as a supervisor. Attendance is supervised by supervisors.

Phase 4: Payments Approval - Post campaign assessments are done, review of which Kebele/Woredas have complete the campaign and once finance resources are disbursed to the Woreda office, Woreda Health office provides a breakdown of vaccine workers to the Woreda Finance Office.

Phase 5: Disbursement: The funds are disbursed from the funder to the Regional Health Bureau to the Zone and to the Woreda Finance Office and then to the payees. Once a letter arrives from the Zone or from the Health bureau office, Woreda finance will verify the funds have arrived. A bank slip will serve as proof of funds that have arrived and new balance is recorded in a file on the computer. The Finance head signs a check and Woreda Finance withdraws the required amount and places the money in the safe at the Woreda office.Then begin the payout process in cash.

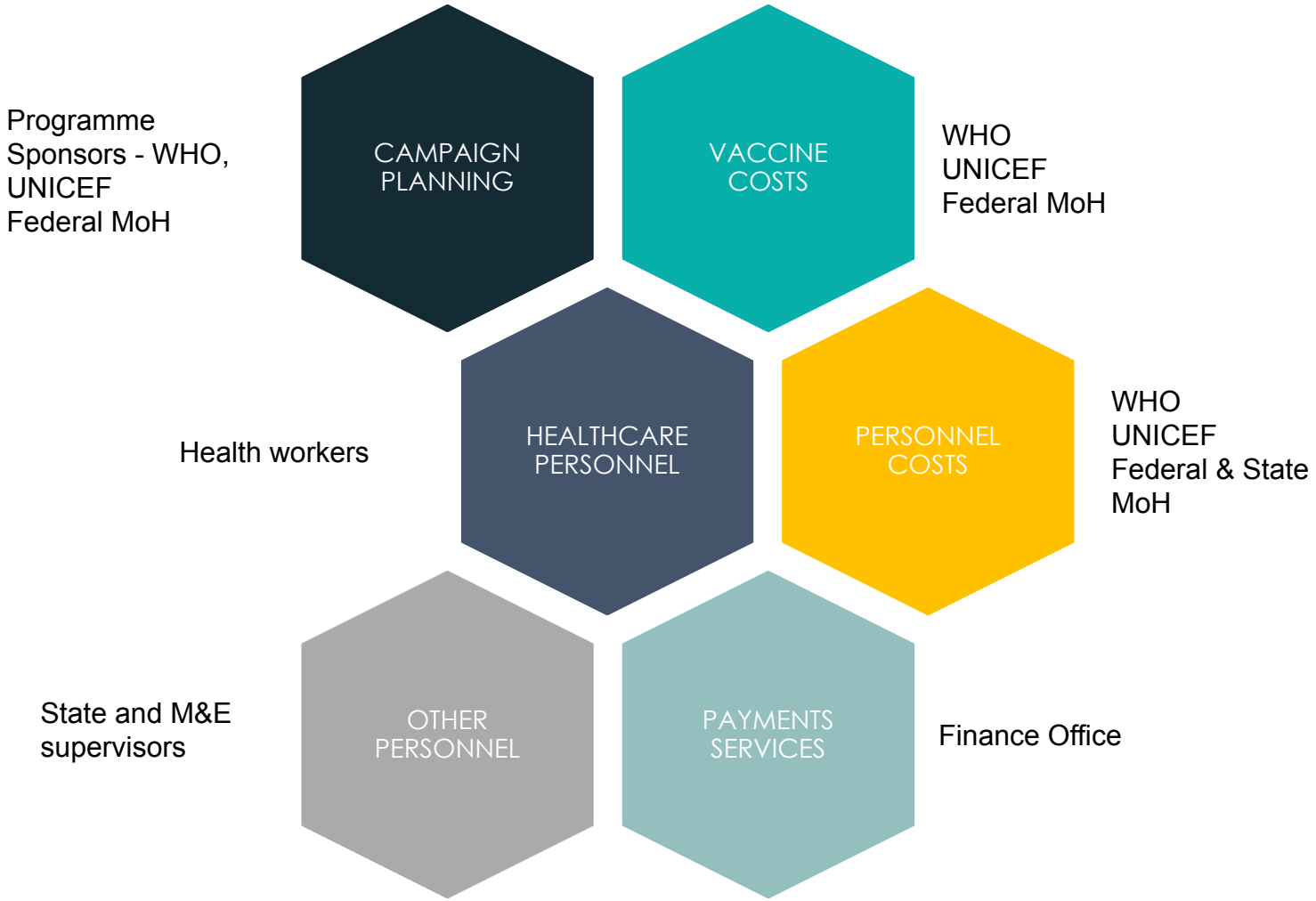


Ethiopia / Oromia Payment Use Case
Journey View



05 Use case map: **Nigeria**

Key activities and responsible stakeholders



Campaign planning	Federal MoH, with support from program sponsors (WHO, UNICEF etc.) set plan for the vaccination campaign. Review micro plans and budgets produced by the Director, Planning & Research. Approved by Federal government.
Vaccine costs	These planners finance the procurement of vaccine doses and associated logistics that are required for the campaign.
Implement campaign	Select, assign roles, determine payments and train personnel. Delegate roles. Map and select sites. Confirm participation. Record attendance and monitor. Submit reports to State Health Office.
Personnel costs	Costs for selection and site mapping, training, Vaccination materials, transportation, logistics, stipends/salaries.
Verify eligibility	Health personnel are selected by the Local government officials (supervised by state supervisors) and their details are sent to the state office for approval.
Payments services	Payments are disbursed in line with approved budget plan by the Executive Chairman and Director of Planning, in line with approved stipends. All payments are disbursed via bank transfers (except cash on very rare occasions, based on approval).

Campaign description

Nigeria's measles campaign implementation body is the National Primary Health Care Development Agency (NPHCDA) and WHO, with the support of Gavi, the Vaccine Alliance.

As of August 2021, Nigeria has reported 10,000 suspected measles cases; 110 local government areas across 29 states and FCT have recorded at least one measles outbreak. Among confirmed cases in children less than five years of age, more than 71.3 percent were not vaccinated. For cases between 10 and 19 years of age, between 60.3 percent and 64.5 percent are not vaccinated depending on age group and for those 20 years and older, 72.6 percent are not vaccinated. Nigeria's measles incidence rate is much higher in the northern region (70.6 per million) compared to the south (17.8 per million).

According to the WHO, the optimum coverage for measles is 95 percent of fully-immunized children under two years of age. However, as per the last coverage done in 2017, some parts of Nigeria are vaccinated as much as 80 percent, while others as low as 20 percent.
Source: Tribune Online

The WHO & UNICEF develops and set out the microplanning document and national agenda for vaccine campaign - with a holistic implementation and budget plan. WHO sponsors state level; UNICEF sponsors National.

WHO and UNICEF sends the approved microplanning document to the National and State Ministry of Health for implementation. This is then further cascaded to the State Hospital Mg boards/SPHCAs.

The microplanning documents are then verified and training is done accordingly across different levels - state, LGAs and Wards.

In Nigeria the directive will come from the Federal MoH to the 36 states' Hospital Management board or Health Center Agencies

Every state develops a proposal (using the UNICEF budget template to state all proposed activities, personnel amd budget, with a cogent form and state approval. This is sent to the National Ministry of Health.

Once state proposal and budget are approved by the Federal Ministry of Heallth, vaccine campaign begins.

Once campaign is complete, report is written by Ward, LGA and State health agencies/boards and sent through the same channels, this onsets the payment request.

Payment processes in detail

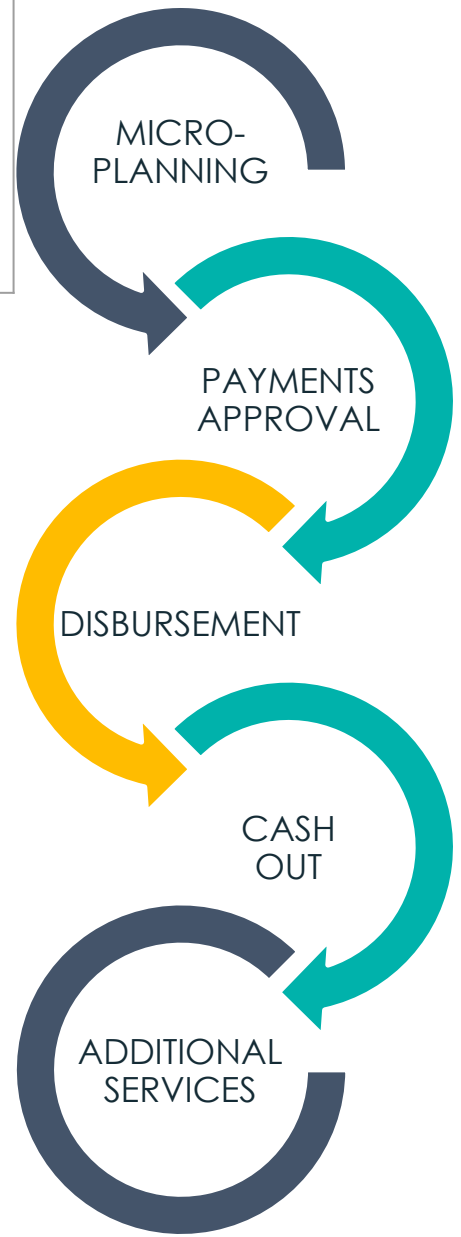
Phase 1: Microplanning - The Federal Ministry of Health begins the MIcroplanning process, which is funded by UNICEF (sponsors National-level) and WHO (sponsors state-level). There are inputs to this by the Directorates of planning who then cascades it down. The State MoH sends a proposal to the Federal MoH (using the UNICEF budget template to indicate the need for the campaign, activities involved and proposed budget. The state supervisors get same information from focal persons at the LGA and wards - All key personnels are involved in this. The Federal MoH always verify the microplan and when complete, present to the 36 states and train them on the content and implementation plan.

Phase 2: Training - The training is done at every level - Ward, Local Govt Area (LGA) and at the State Level. At the LGA level, there are field officers (including volunteers and town criers) who who go around the wards and LGAs to announce the onset and details of the vaccination campaign. The state supervisors work with the LGA officers to mobilise, recruit and confirm health health workers that will be used. The the health extension workers are also informed and engaged on the upcoming campaigns.

Phase 3: Campaign - The state supervisors are in charge of this running & coordination. During the vaccination campaign, there is a team leader in each LGA who reports to the state supervisor. Each state supervisor collect details of all personnels in the vaccination campaign team. The SIOs and their team request information from the LGA and Zonal offices, then compile and send to the Primary Healthcare Board. Attendance is monitored by the team leaders and verified by state supervisors for sign-off.

Phase 4: Payments Approval - The SIOs coordinate all information and verify the personnel list, details and payments. After the campaign reports are reviewed and verified, a post campaign assessment is done and reviewed. The payments are then disbursed to the states, in line with the approved budgets, The State Immunisation Officers submits a detailed breakdown of personnels to the state finance office - including the category of work done, frequency and rate.

Phase 5: Disbursement: The funds are disbursed from the funder to the Federal Ministry of Health and then disbursed to the payees. The Director, Planning & Research ensures that all details are uploaded as soon as the payment is confirmed into the State's Ministry of Health's bank account. The details (as submitted by the SIO) is uploaded unto the bank's payment platform by the accountant (uploader) . The uploader uploads all payments, which goes through the different levels of approval and eventually paid directly into the personnel's bank accounts via direct bank transfer.



Nigeria Payment Use Case
Journey View

Activity	Description
Solicit planning documents	The national government sets the campaign goals and distributes a set of microplanning documents to concerned state governments.
Authorize microplanning	Microplanning documents cascade down from the national government to concerned state and local governments.
Planning and budget	Beginning at the level of the ward, plans for the campaign are developed with staffing and budget. Ward-level plans are aggregated in to state and national plans.
Approve budget	At the national level, the plan for the campaign is reviewed and approved.
Communicate the plan	The national health ministry creates training and guidance materials for state and local governments on the plan for the campaign.
Coordinate training	State-level offices of the ministry of health supervise the recruitment and training of health workers.
Mobilize local staff	Ward-level offices of the ministry of health mobilize and recruit local staff for campaigns.
Recruitment and training	During the training phase of the campaign, team leaders are designated for each team of vaccinators.
Supervise field teams	Supervisors monitor the daily attendance of workers in the teams of vaccinators.
Supervise local governments	State-level offices of the ministry of health supervise the performance of local teams during the campaign.
Register payees	State-level offices for finance and administration collect personnel details from each team of vaccinators, including bank account and payment instructions.
Request a payee list	State-level offices request a list of payees from each team of vaccinators, detailing the stipends and allowances to be paid.

Activity	Description
Create a payee list	Ward-level offices of the ministry of health create lists of payees on each team who are authorized for specific wages and allowances.
Aggregate payee lists	Ward-level offices also aggregate the lists of payees at the ward level, which are sent to the state office for payment.
Verify payee lists	State-level offices verify that the payees are eligible for payment with the primary healthcare board, including both the personnel profile and payment instructions.
Verify campaign reports	Federal-level offices review and verify that campaign targets for coverage have been met.
Campaign assessment	Federal-level offices complete a review of the campaign assessment.
Transfer funds	Funds allocated to allowances are transferred from sponsors to the federal government, and then to state governments.
Authorized disbursement	State immunization office details payments to be disbursed.
Verify payee list	Director of planning and research validates the personnel details and payment instructions.
Prepare disbursement	Ward-level accountants prepare the list of payments for disbursement.
Approve disbursement	Ward-level finance director and executive secretaries independently verify payments.
Accounting	Payment details are recorded both on paper and in an electronic database.
Disbursement	Bank issues payment as per the payment instructions on file, which must specify a bank account for each payee.

06 Findings and conclusions

Findings: **Key Functions** of Stakeholders

Stakeholder	Always does	Sometimes does	Additional costs and risks
National Health Ministry	Coordinates the national budget	Accounting for funds disbursed	
State or Regional Government	Coordinates planning Supervises local implementation	Accounting for funds disbursed Manage funds for the campaign Payments services / disbursement	
Local Government	Submits personnel registry Recruits teams Submits payment requests	Accounting for funds disbursed Manage funds for the campaign Cash logistics and security Cash disbursement	Bears the risk of payments errors Collects personnel details and payment instructions
Donors	Provide financing for vaccines and personnel costs	Payments services / disbursement Accounting for funds disbursed	
Health Post or Supervisor	Track daily attendance Report attendance and location to local government or health office	Cash disbursement	
Frontline Health Worker		May require documentation and time for account opening, own device, or KYC compliance. May share devices or accounts.	Cash-out costs Register for new accounts Travel to collect cash allowances

Findings: **Centralization** of Health Ministry

Countries exhibit different levels of centralization in their administration of healthcare campaigns and related administrative processes.

Key stakeholders in a centralized country will be predominantly at the national level. The budget and finance processes will reflect their greater role in the day-to-day operations of the healthcare sector.

In a decentralized country, the national government remains an important stakeholder in setting the agenda for supplemental immunization activities (SIAs). They contribute to decisions about the scope and coverage of SIAs. Yet, payment processes and financial management may be devolved to state and regional governments.

In a decentralized country, payments processes *may or may not* be subject to national law and rules that require specific payment methods, such as bank-based payments in Nigeria.

	Finance and administration	Personnel and operations
Centralized	Financial policies and procedures are managed by the national government. Policies and procedures are standardized. Digital payments are beneficial by allowing direct disbursement from the central finance office.	Personnel and operations are also managed by the national government. Human resources are centrally managed. Local governments request resources subject to national policy and procedures.
Decentralized	Financial authority is devolved to state and local governments, in accordance with applicable national law and policy. State and local governments have some authority to manage funds and financial operations reflecting local geography and infrastructure.	Personnel and operations are driven by state- and local-level management with financial support from the central government.

Findings: **Geography** and Demographics

Country	Rural	Youth	Gender	Female-headed households
Burkina Faso	69%	44%	50.0%	8.8%
Ethiopia	78%	40%	50.0%	22.1%
Kenya	72%	39%	50.3%	31.0%
Nigeria	48%	43%	49.3%	18.0%
Implications	Rural locales confer challenges for cold chain and logistics.	Catch-up campaigns are likely to target ages 0-59 months.	Gender imbalances in population could reflect gaps in access to healthcare.	Female-headed households could correlate with gaps in access to healthcare.

Source: World Bank staff estimates using United Nations Population Division's World Population Prospects: 2019 Revision.

Findings: **Payments Infrastructure** and Access

Country	Made or received a digital payment (% age 15+)	Received wages: via mobile money (% of wage recipients, 15+)	Received wages: into an account (% of wage recipients, 15+)	Received wages: in cash only (% of wage recipients, 15+)	Account (% age 15+)	First account was opened to receive a wage payment (% age 15+)
Burkina Faso	33%	23%	41%	47%	36%	7%
Kenya	78%	60%	79%	17%	79%	19%
Ethiopia	12%	<1%	17%	83%	35%	..
Nigeria	33%	21%	52%	42%	45%	16%
Implications	Reflects any experience at all with digital payments.	Mobile money for wages lag digital payments by about 20 p.p.	Wages paid into accounts exceed digital payments as much as 18 p.p.	Cash and wages paid to accounts account for most wage payments.	Ethiopia has a deficit in wage payments through accounts.	Wage payments drive account use in Kenya and Nigeria.

Source: World Bank Global Financial Inclusion Database (Global Findex), 2021 except in Ethiopia, where 2017 is the most recent available.

Findings: **Role of Donors** in Payments

Donors have opted to retain specific roles for themselves in particular geographic contexts that reflect the experience.

Underwriting often requires the participation of national, bilateral, charitable, and international organizations.

Budgeting occurs at several levels (from national to local) that will govern expenditures on operations and allowances for frontline workers.

Registering the payment credentials of frontline healthcare workers requires the participation of administrative staff at the local level, even when payments are disbursed centrally.

Political control over the disbursement function is sensitive. Donors may choose to mitigate fiduciary risk by conducting disbursement. Host country governments may push back in order to retain political control over the disbursement function.

Budgeting is a collaborative process with national and local offices.

National health ministries typically take a lead in day-to-day operations.

Donors may provide allowances directly to staff to mitigate fiduciary risks.

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Methodology: sample allocation by country and institution

Interviews were conducted via video conference and telephone call subject to feasibility. Participants were selected from among the state (or regional, or county) and local governments where vaccine campaigns occurred. Selection was done on a stratified basis, to ensure variety among the economic and geographic regions of each country, as well as a spectrum of urban and rural locations.

Contacts to state (or regional, or county) and local governments were provided from the national (central) offices of the ministry of health. Contacts to the health post were provided by the local government personnel.

Although the research initially planned for six research sites in different states of Nigeria, representing the six geographic regions of the country, the Ministry of Health was reluctant to endorse participation. Consequently, contacts could only be obtained in two states where the Gates Foundation had active contacts.

Although the research initially planned for four research sites in Burkina Faso, the Ministry of Health was slow to respond to invitations to participate in the research.

Country	*Organization*	Number of interviews
Burkina Faso	National ministry of health	3
	Regional ministry of health	3
Burkina Faso Total		6
Ethiopia	Ministry of health	3
	Sub-city	2
	Woreda	4
Ethiopia Total		9
Kenya	County	3
	Health post	8
	Ministry of health	1
	Subcounty	6
	UNICEF	3
	UNOPS	3
Kenya Total		24
Nigeria	Independent consultant	1
	Ministry of health	3
	State ministry of health	12
	UNICEF	3
	WHO	3
Nigeria Total		22
Grand Total		**61**

Thank **you!**

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