

Report of a Vaccination Research Study Conducted in 4 Countries

Dalberg
Research

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 Particles
for Humanity

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Study Overview

Overview

Research Objectives

To understand from the general public and stakeholders their views, opinions and feelings towards vaccination

- ❑ **Key health decision influencers**
- ❑ **Organization of current vaccination programs**
- ❑ **Vaccination record keeping processes**
- ❑ **Routine & mass immunization and implementation logistics**

Research Methodology

Exploratory utilising qualitative data collection techniques in Kenya, Malawi, Benin and Bangladesh

Stakeholder Interviews

A distillation of in-country vaccination landscape and opportunities that exist to improve and strengthen existing or emerging vaccination systems.

Focus Group Discussions

An in-depth understanding of factors influencing health-seeking decision making from a socio-economical and socio-geographical lens.

Methodology

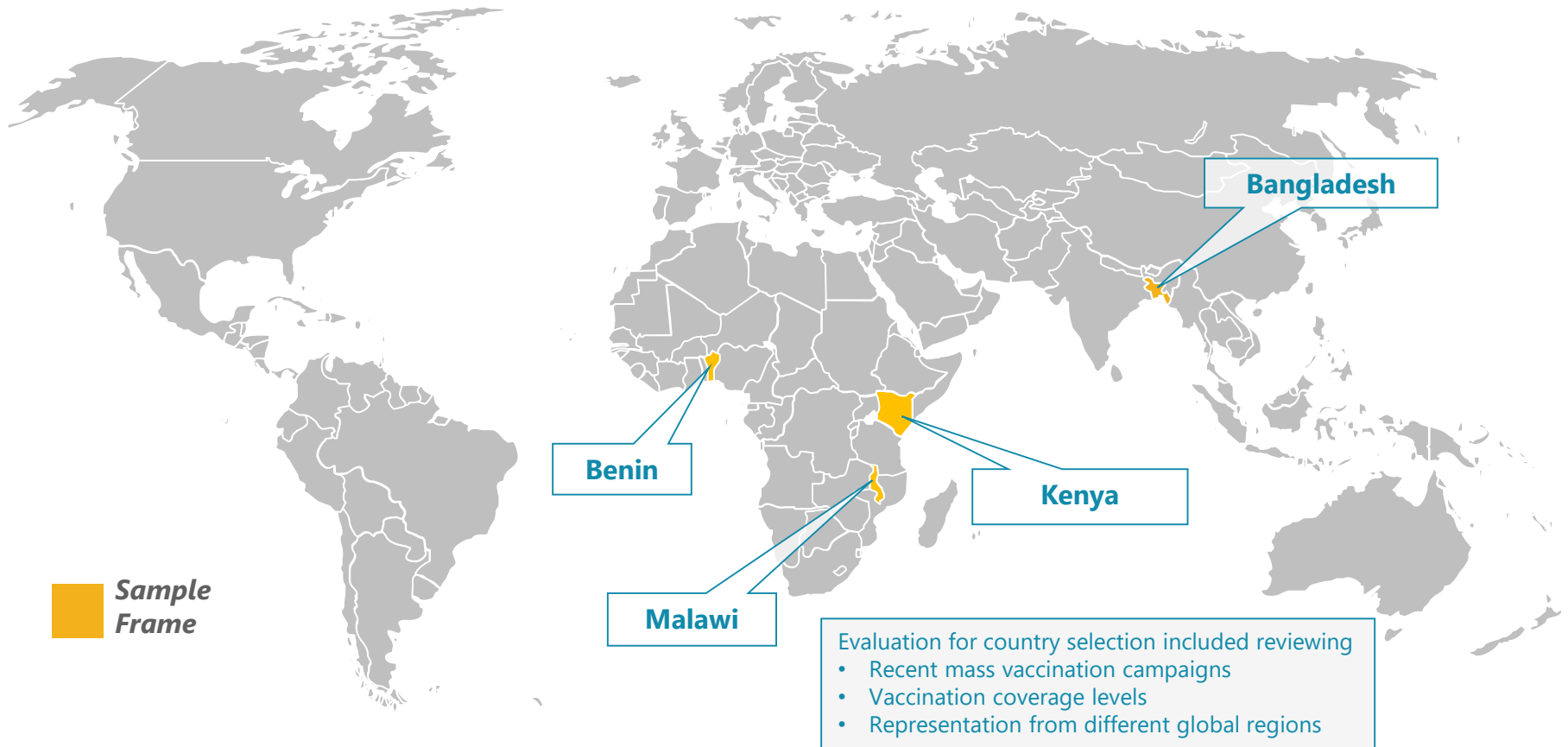
Methodology

Survey design and data collection: Data was collected through face-to-face focus group discussions (FGDs) and key informant interviews (KIIs) in January and February 2020. The discussions and interviews were conducted using structured discussion guides that were designed and drafted by Dalberg Research with guidance and feedback from Particles for Humanity. All discussions were conducted in local languages and findings were back translated to English for analysis.

Fieldwork organisation: Dalberg Research selected suitable field personnel from their internal pool of in-country personnel. Before commencement of the fieldwork, selected teams were taken through an extensive training to ensure they were familiarized with the study objectives. In Bangladesh, Dalberg Research collaborated with a fieldwork partner to make use of their field team resources. The fieldwork was managed by a research manager who was supported by local supervisors and team leaders.

Data handling and processing: Dalberg Research abides by global standards of research participants' protection and data security protocols. As a requirement, all staff sign non-disclosure agreements signifying their understanding of ethical behavior while employing the survey and proper handling of respondents' confidential and private information, including personally identifiable information. All research participants were undertaken through a consenting process to explain the study, risks and benefits, as well as a voluntary opt in/out.

Country Selection



In each country:

- ❑ *5 stakeholders from respective ministries of health and private/civil organizations that support government vaccination programs.*
- ❑ *4 focus group discussions with adult male and female participants and community health workers.*

Data Analysis

Analytical Framework

Dimension	Description	Type of Information
Contextual <i>(How do demographic factors vary according to different vaccine users?)</i>	Understanding health decision making through a geographical and cultural disposition lens	<ul style="list-style-type: none"> • Age • Gender • Marital status • Income • Location • Home location (rural vs. urban) • Religion • Health services marginalization
Behavioural & attitudinal <i>(What interests and underlying needs exist?)</i>	Analyse vaccine user perceptions of flexibility vs. rigidity in decision making, their trust levels of various products and channels, as well as their need to feel included in development of health interventions	<ul style="list-style-type: none"> • Perceived benefits • Perceived drawbacks • Influence of geographical home location • Sociocultural influence • Drivers of technology consent • Trust in vaccination(s) and its processes and procedures

Data Analysis

The audio-recordings of the interviews were transcribed and reviewed in several phases of analysis to assess most common themes, less common themes, and similarities and differences within the subgroups. Data from all discussions were analyzed so it could be organized into the categories of interest.

Thematic analysis was selected as an analysis method as it is highly inductive and allows for deep knowledge and insights with context to be generated from the data.

A preliminary review was conducted in order to get a general sense of the data and reflect on its meaning. Next, a more detailed review was performed, and data was grouped into segments or units that reflected specific thoughts, attitudes, and experiences of participants.

Thematic Analysis

Development of relevant themes:

This was guided by the study objectives, the analytical framework and the tentative hypotheses

Grouping of common words and phrases under each theme:

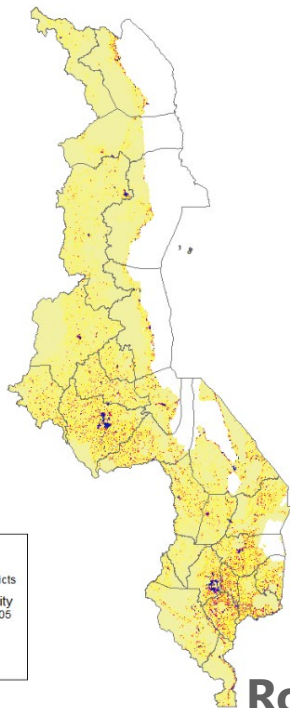
Using word based technics where commonly repeated words and phrases are identified

Content analysis:

Consisted of an in-depth description of the key findings under each theme

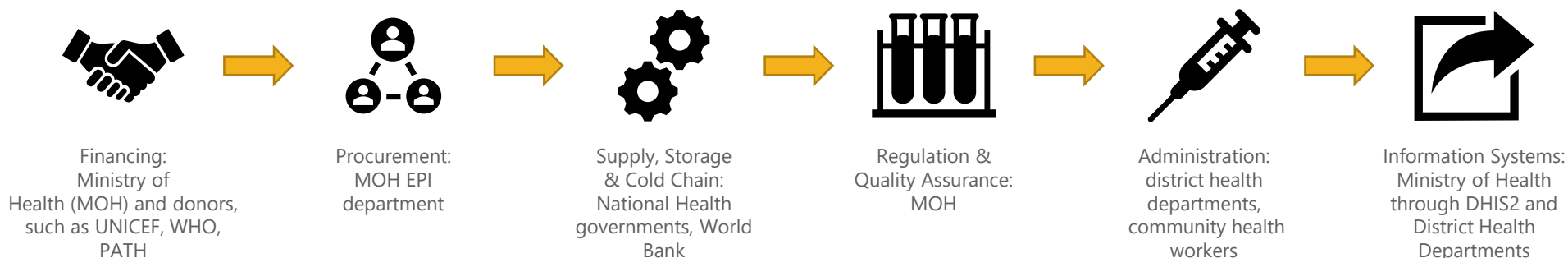
In-Country Insights

Malawi



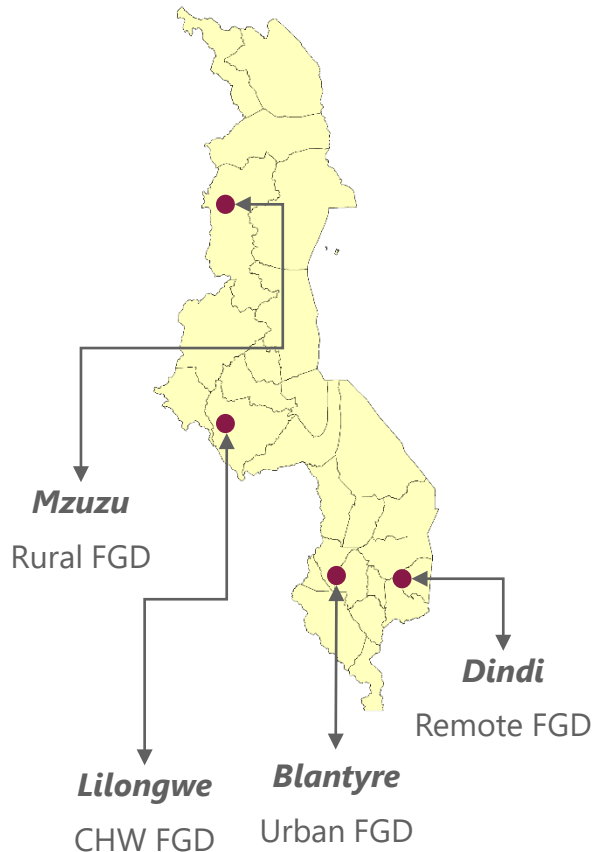
- ❑ Diphtheria and tetanus toxoid with pertussis (DTP1) has the highest vaccine coverage at 95%, followed by polio that has a coverage rate of 94%. BCG vaccine coverage is at 91%
- ❑ Coverage rate for the first measles vaccine (MCV1) is 92% and is much lower for the subsequent dose (MCV2) at 75%
- ❑ >80% of Malawi's population lives in rural areas
- ❑ Past studies conducted indicate children belonging to mothers who have no vaccination card or have lost a vaccination card are less likely to receive complete immunization
- ❑ >500,000 children remain unvaccinated

Routine and Mass Immunization Stakeholders



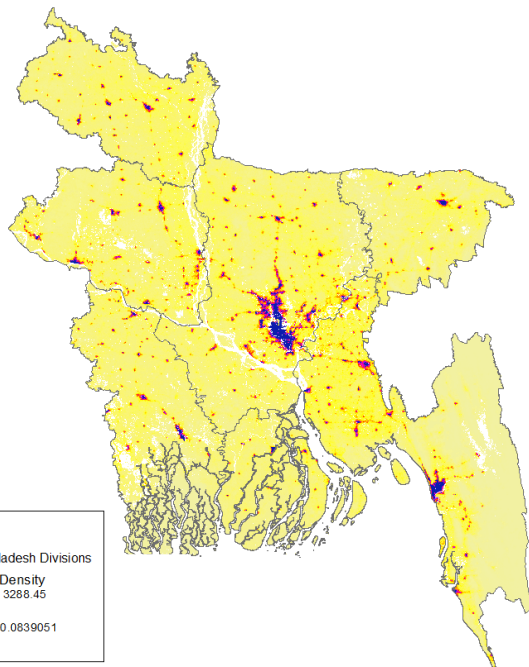
Source: UNICEF Estimates of National Immunization Coverage 2019, Factors associated with completion of childhood immunization in Malawi: a multilevel analysis of the 2015–16 Malawi demographic and health survey: precious Majoney et al, Malawi census

Malawi Key Insights



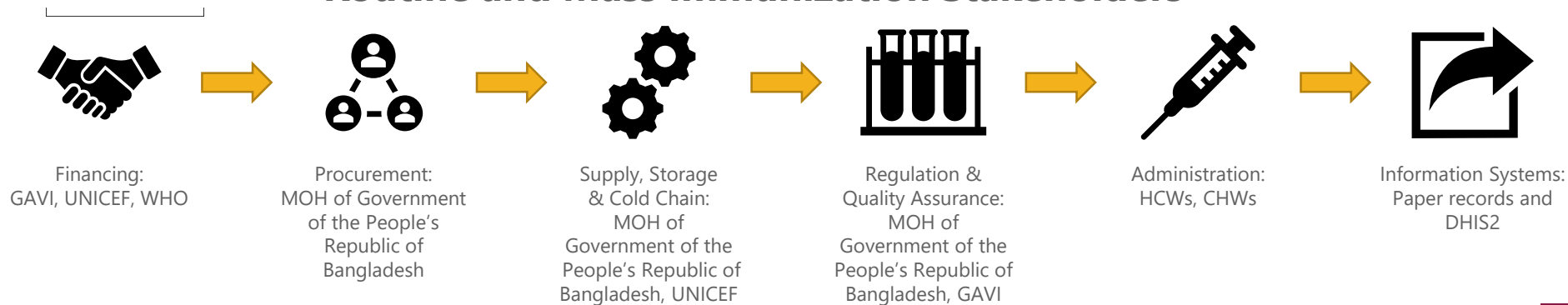
- ❑ Mass immunization campaigns done through schools do not provide any records to either students or parents. Audits solely rely on the district supply chain (i.e., amount of vaccine vials used).
- ❑ Participants further point out that for mass vaccinations done through schools, no marks or records are provided to either children or parents; hence it is quite difficult to identify vaccinated children from the unvaccinated ones.
- ❑ When vaccination cards are lost, healthcare workers (HCWs) must rely on parents to give the vaccination history of the child to the HCW who transfer this information to a new card and reissues it.
- ❑ In other instances, the child has to be given repeat doses of the vaccine
- ❑ In Rural areas there is no trust in HCWs. Participants do not trust that all vaccinations their children have ever received have been captured in the vaccination cards they are issued.
- ❑ HCWs do not trust a child's vaccination history as given by the parents if the vaccination card is lost leading to repeat vaccinations being administered.
- ❑ Parents are not consulted prior to a mass immunization campaign, especially those that are done in schools.
- ❑ Word of mouth between HCWs and children sometimes substitutes for vaccination records in mass vaccination campaigns.

Bangladesh



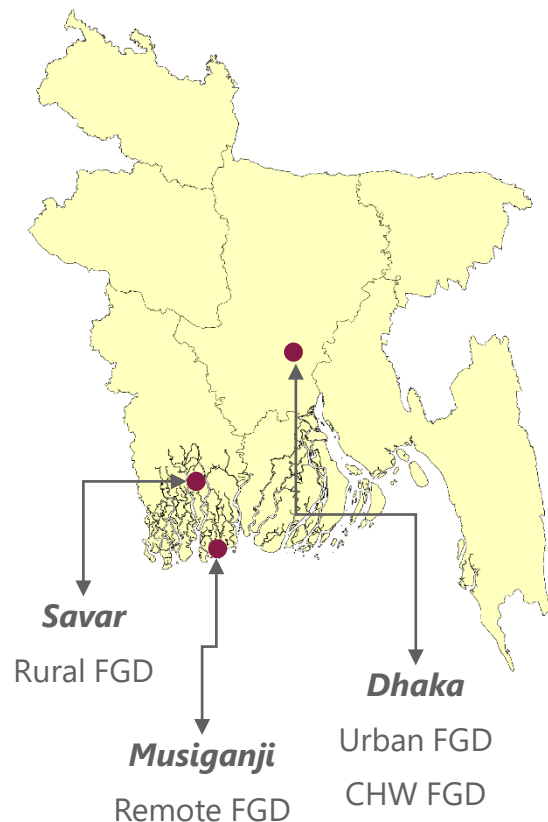
- ❑ About 84% of children are fully immunized in the whole country.
- ❑ BCG has the highest coverage rate (98%) followed by 3 doses of oral polio vaccine (91%) and pentavalent (91%).
- ❑ Coverage rate is lowest for measles vaccine (86%).
- ❑ Vaccine coverage is slightly higher in urban areas when compared with rural ones.
- ❑ >500,000 people have crossed from Myanmar to Bangladesh. This population heavily relies on mass vaccination campaigns to prevent disease outbreaks brought on by the living conditions in the refugee camps.

Routine and Mass Immunization Stakeholders



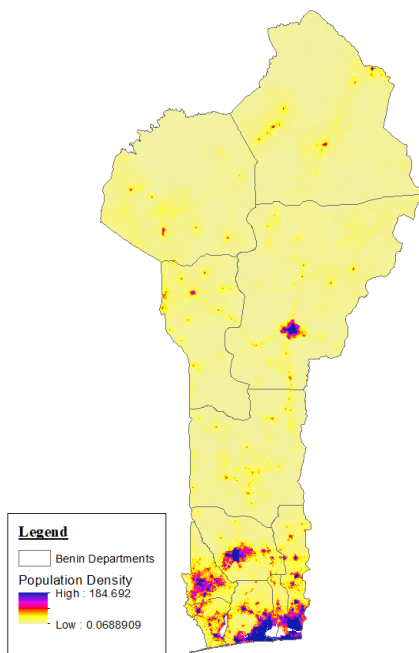
Source: WHO and UNICEF vaccine coverage estimates 2019, Bangladesh DHS Report 2014

Bangladesh Key Insights



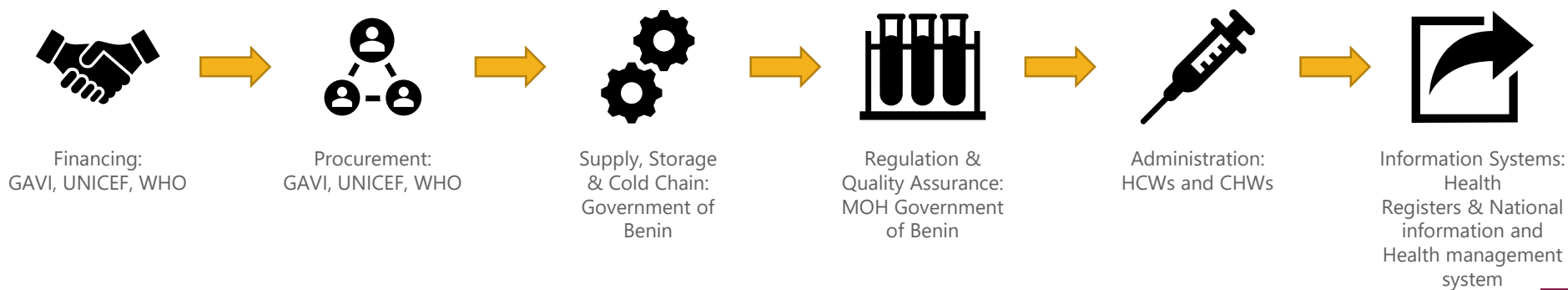
- ❑ No mark or record provided to the population after vaccination during mass immunization campaigns. Sometimes they will ask for the usual EPI card that contains routine immunization records.
- ❑ Community health workers are very crucial to pass information about upcoming mass immunization campaigns across the 3 demographics of interest.
- ❑ Participants do not value informed consent where vaccination is concerned. They deem it as lifesaving and therefore do not think HCWs need to take them through informed consent process.
- ❑ Religious leaders and community health workers are a crucial health information sharing tool during mass immunization campaign sensitizations.
- ❑ In remote Bangladesh the CHW network is very vibrant and is key during routine immunization. They even do door to door tracing.
- ❑ Routine immunization is sometimes done from one house to another to improve coverage.
- ❑ Vaccination are associated with spending a whole day at a health facility, queuing at the expense of competing household needs. Any intervention that means spending less time at a health facility will be well received.

Benin

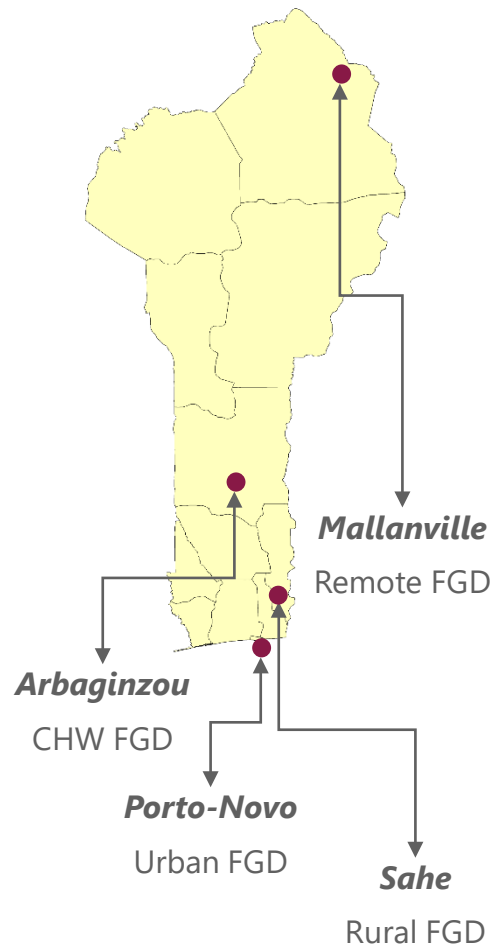


- ❑ BCG has a high coverage rate (89%) followed by oral polio vaccine 3 (75%)
- ❑ Coverage rate is lowest for measles vaccine (71%).
- ❑ Vaccine coverage is slightly higher in urban areas (60%) when compared with rural ones (54%).
- ❑ Vaccine drop out rates are very high in low income areas.
- ❑ Benin is one of the countries in West Africa flagged for underspending immunization donor funds.

Routine and Mass Immunization Stakeholders

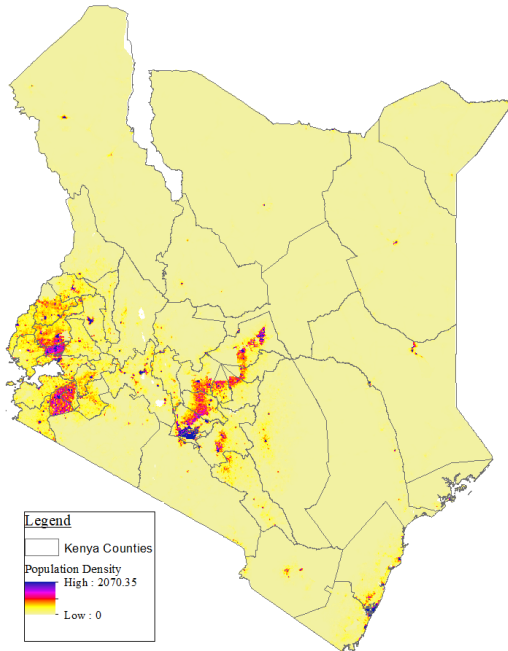


Benin Key Insights



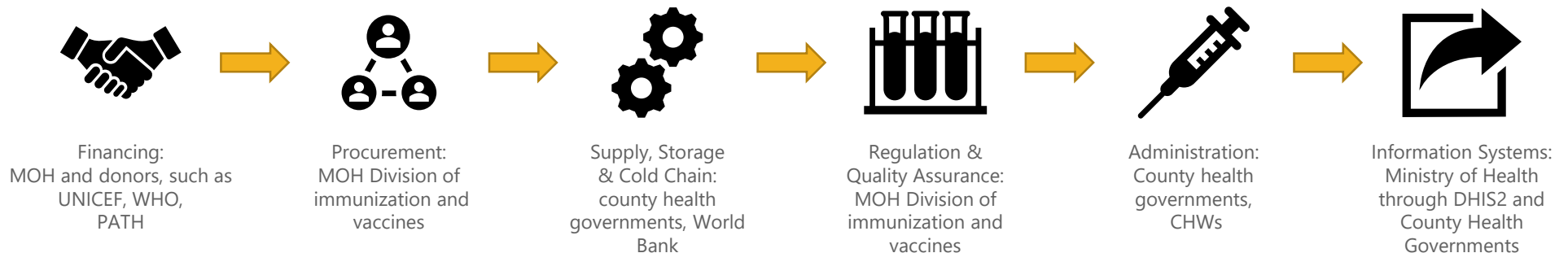
- ❑ Healthcare providers take the action of mothers bringing in their children for immunization as informed consent. Vaccinations are associated with pain in both children and adults.
- ❑ Vaccination campaign sensitization and awareness does not always reach everyone, perhaps because they do not use skilled HCWs as mentioned in one of the KIIs.
- ❑ Sometimes the audit is done right after a HCW has marked a house/child with a marker; however, generally there seems that there is no structure to how audits are conducted.
- ❑ Vaccination information is not well elaborated to the public, therefore there is hesitancy to question procedures such as the child's finger getting marked with a felt pen.
- ❑ No informed consent has been sought from majority of the FGD participants.
- ❑ Physical vaccination registers act as back up in case a vaccination card gets lost.
- ❑ Generally, there is more awareness about the risks and benefits of not having/having vaccination cards in urban Benin as opposed to rural and remote awareness.
- ❑ A lot of risks are associated with using markers on children's fingers; the mark is not visible or comes off causing children to receive multiple doses of vaccines.
- ❑ In remote areas, there is no awareness of what the vaccination card contains or what vaccinations the child has received. Perhaps it indicates trust in HCWs.
- ❑ No perceived health risks or benefits associated with either having or losing a vaccination card; only a financial risk of having to buy a replacement card.

Kenya

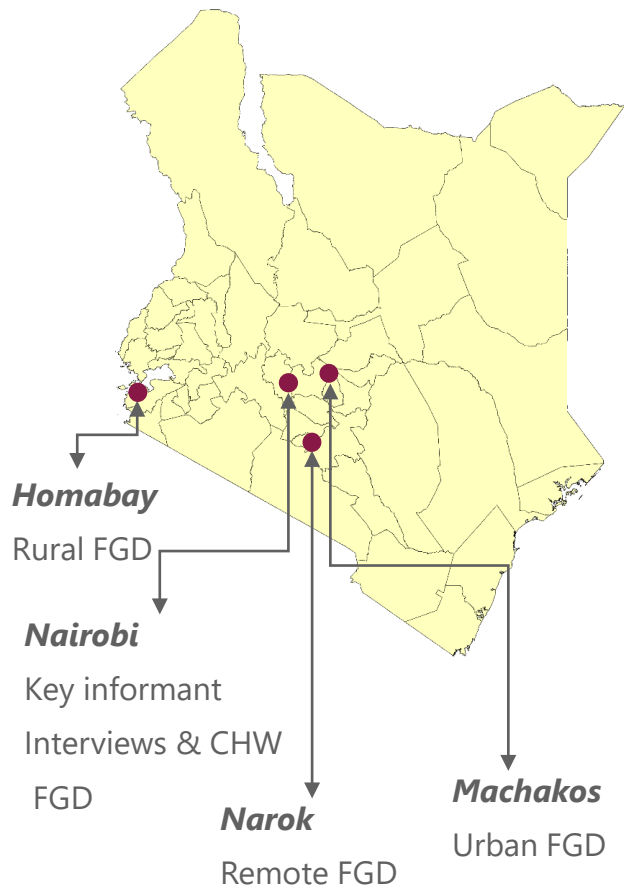


- ❑ BCG has the highest vaccine coverage at 95% followed by diphtheria and tetanus toxoid with pertussis (DTP3) at 92.
- ❑ Coverage rate is lowest for measles vaccine (89%) and polio (87%).
- ❑ Weak routine vaccination coverage, vaccine refusal and difficulty in accessing some locations have been mentioned by the government as some of the reasons Kenya has experienced polio outbreaks in the last 2 years.

Routine and Mass Immunization Stakeholders



Kenya Key Insights



- ❑ There are high levels of trust towards HCWs, and generally people will be accepting of a technology if it is recommended by HCWs.
- ❑ A lot of the participants pointed out that incomplete medical records is a pain point and when a vaccination card is lost then chances are children will get repeat vaccinations because records do not exist.
- ❑ For adults, the vaccination records they have are even more incomplete. For instance, if you lose a yellow fever vaccination card you have to get a new vaccination to get another card or pay the full fee of a new vaccination to get a replacement.
- ❑ Among the major hindrances to vaccination in Kenya is religion.
- ❑ Across the remote and rural demographics of interest, there is no clear understanding of informed consent and the role it plays in health services. In urban areas some participants have given both verbal and written consent.

Overall Findings

Gender Insights



Women are entrusted to keep all the vaccination records and make immunization decisions for the children.

Young Mothers fear going to hospitals for fear of being reprimanded. This means this demographic contributes to a lot of vaccine drop out rates. More health education is needed to ensure they understand the importance of immunization.

Mothers-in-Law are very crucial in the vaccination process in Bangladesh. They make all the vaccination decisions in the household mostly because of their prior experience as Mothers.

Word of mouth a trusted source of information among women. Sometimes they pass along rumors myths and misconceptions that affect uptake of health services.

Women also tend to take health issues more seriously and seek medical care/assistance quite early.



In Kenya, Benin and Malawi the men control health decisions typical with their head of the household status. This status has to do with them being the household breadwinner.

Men who live in urban areas are generally more informed than the ones living in rural and remote areas. They tend to make health decisions together with their spouses/partners and actively seek out information to supplement what they have received from either Health Care Workers or Community Health Workers.

Men do not uptake preventive healthcare which comes in the form of health education from either Health Care Workers or Community Health Workers. They uptake healthcare services only when they are sick.

In the African countries, decision making is still largely patriarchal, and women rely on men to either make the sole decision or support their (women's) health decision. The latter is mostly associated with urban areas.

Demographic Insights



REMOTE

There is uncertainty in the vaccination processes and procedures, as most of the participants that live in remote areas have low education levels and are not able to fully comprehend what HCWs communicate to them.

Acceptance of new health interventions across this demographic is heavily influenced by the trust this demographic has in HCWs and in public hospitals. They would accept and use a technology if HCWs recommended it.



URBAN

Most participants that live in urban areas have access to information as well as misconceptions about vaccination which they spread among each other at will.

Health decision making in urban households is most times jointly between the mother and the father.

Households in urban areas are more receptive to new health interventions perhaps because of ease of access to information. This demographic makes their own decisions and is not swayed by HCWs advice or information.



RURAL

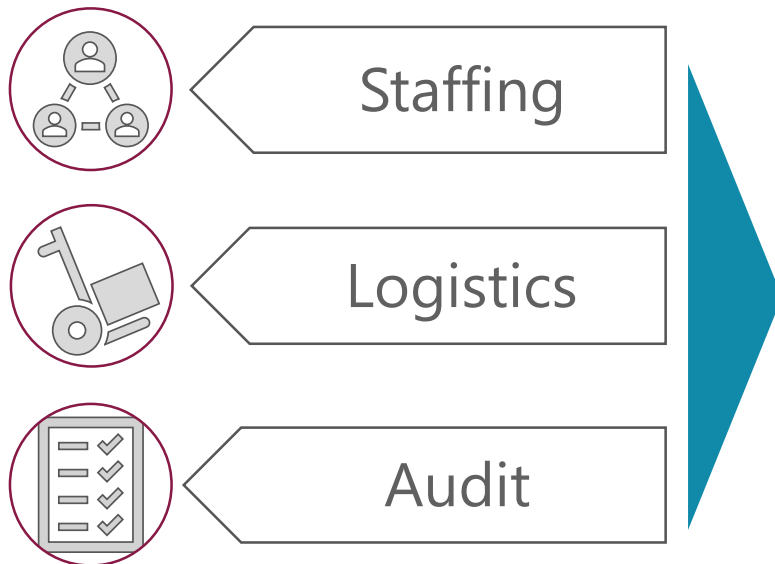
Acceptance in rural areas is driven by shared experiences. Uptake of new technology would be largely driven by a positive experience experienced by one or more members of the same community. This implies a strong sense of community.

Traditional healers and religious leaders are trusted community gatekeepers. Participants living in rural areas are accepting of health information passed through the two modes.

Participants point out that they seek health services from markets and pharmacies as health facilities are inaccessible due to distance and time taken to reach facilities.

Across the 3 demographics there would be no uptake of vaccination services if a technology is introduced in health facilities and the community had no prior knowledge or engagement ahead of its roll out.

What Happens During Mass Immunization Campaigns



CHWs assist HCWs during mass immunization campaigns by marking the children who have received vaccination or the houses in case of oral vaccine. Human health resources are scarce in all four countries and it is more so evident during mass immunization campaigns.

Respective Ministries of Health purchase (through UNICEF, GAVI) the vaccines and they are then taken to the national government storage rooms where they are then taken to the regional cold offices. The district is then responsible for ensuring the vaccines reach the health centers.

CHWs are issued with tally sheets or forms that they use to count the number of children who have received a vaccine. These are integrated into the normal vaccine record registers. Two crucial roles are allocated to CHWs in a very fast paced environment and 100% effective audit is not possible.

What We Learned from Community Health Workers

Key Insight	Context
Vaccination record keeping	<ul style="list-style-type: none">❑ Loss or damage of MCH booklets or immunization cards through fires, especially in slum areas.❑ Facilities experience stock-outs of MCH booklets or cards.❑ Clients may forget their booklets or cards at home.❑ Clients may give wrong information (names, age, contact details) making follow up difficult.❑ CHWs and clients are not issued with record books and they have to source for them (e.g., A5 exercise books cut in half which they have to pay for while the government-issued booklets are free).❑ When clients change to another health facility without the MCH booklet or immunization card, it is difficult to trace the immunization history of the child.
Mass vaccination campaigns audits	<ul style="list-style-type: none">❑ Children are marked on the nail of the little finger using a marker or in the ridge between two fingers.❑ Code numbers are written on the doors and gates of the homes where vaccines have been administered.❑ No uniformity in how audits are done and no standard documentation. Each CHW had their own way of tallying. Although they mention there should be a standard way it seems no one enforces.
Myths and misconceptions	<ul style="list-style-type: none">❑ There are a lot of myths and misconceptions about health that contradict the government's health interventions. At times, the government has to use force (i.e., the police or the chief) to ensure that communities adhere to the government's health-related directives.❑ The most rampant consistent myth mentioned was vaccination causes developmental challenges and sterility. This came up from all the CHWs in Benin, Kenya, and Malawi.

What We Learned from the Key Informant Interviews

Key Insight	Context
Informed consent	<ul style="list-style-type: none">• Vaccination coverage and adherence is a crucial indicator across the 4 countries, therefore informed consent is not deemed necessary. It's expected the community will avail themselves for both routine & mass vaccination.
Mass immunization campaigns	<ul style="list-style-type: none">• There are gaps associated with audits. HCWs rely on CHWs to assist with audit. CHWs lack training and resources in most cases bringing into question the validity of the numbers recorded.
Leveraging on mobile phone penetration	<ul style="list-style-type: none">• As governments work on improving vaccine information systems, they are leveraging on increasing mobile phone penetration to send reminders on routine immunization and information on mass immunization campaigns.

"Not necessarily technologies but new vaccines and they have required consents like now we are doing the HPV like other vaccines we are taking them coming as consent, but for the urban private schools because we know they are difficult population the school makes a deliberate effort to write the mother to consent"

- Stakeholder, Malawi

"If we miss a vaccination date, they call us to know the reason why we have missed the schedule"

**- Rural FGD participant
Bangladesh**

What We Learned from the Key Informant Interviews

Key Insight

Context

Myths and Misconceptions

- Across the 4 countries myths and misconceptions are a **huge threat to effective** vaccination uptake and adherence. These are mostly passed down from one generation to another.

“Despite these sensitivities, there are often some traditional leaders in remote villages who refuse to let children get vaccinated because they believe that these vaccines create problems for their children.”

- Stakeholder, Benin

Implementation of health interventions

- Governments prioritize health interventions that **can demonstrate sustainability** without requiring additional expenditure.
- Any new technological health intervention **must be interoperable** with existing systems (e.g., DHIS2).

“Technology wise we should be able to segment our audiences before we create strategies to reach them. If we target to reach them through radio or SMS form in the urban areas, it will be easy, but network can be a challenge for those caregivers in remote areas.

We need to look for strategies that will work everywhere”

- Stakeholder, Kenya

Vaccination Records

- All the countries **still heavily rely on paper-based EPI cards** that are frequently lost or not produced on demand. Attempts to digitize have been tried by some Govts however they lack sufficient resources to sustain efforts.

Key Takeaways

- **Opportunities for improving vaccine practices exists in all four countries**
- **Community Health workers play a crucial role in vaccination information systems**
- **Community gate keepers such as religious leaders and administrative heads are a crucial influencer for community health seeking behaviours/decisions**
- **Geographical disposition, gender, and socio economic/cultural factors affect uptake of vaccination services at the community level**

