

From Exchange to Action

Summary Report of Gavi Zero-Dose Learning Hub Inter-country Peer Exchanges (ZDLH-X2 and ZDLH-X1)

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1. EXECUTIVE SUMMARY

The second Gavi Zero-Dose Learning Hub (ZDLH) online peer learning event (**ZDLH-X2**) took place in September 2023, with a focus on **Nigeria and Uganda**. The first peer learning event, ZDLH-X1, was held in May 2023 and focused on Bangladesh and Mali. The ZDLH-X2 event was the centrepiece of a **mini-programme of learning** that began with completion of a questionnaire on local zero-dose challenges, practices and priorities, and included the online event itself, a follow-up online event for reflection on learning at ZDLH-X2, and completion of a post-event questionnaire.

ZDLH-X2 activities generated the following **outputs**:

- A deeper understanding of **local zero-dose challenges** in Nigeria and Uganda.
- A series of detailed **case studies** from Nigeria and Uganda outlining approaches taken to identify and reach zero-dose and under-immunized children and missed populations.
- Insights into the **nature of the knowledge gained** by participants from Nigeria and Uganda and ways in which they plan to **translate knowledge to action**.
- Insights into the effects of participation of **personal and professional development**.

CHALLENGES AND PRIORITIES

A questionnaire was used to gather information on participants' zero-dose challenges, priorities and learning needs, with particular attention given to responses from participants from Nigeria and Uganda. To increase the amount of information analysed, pre-event data from ZDLH-X1 and -X2 were pooled. An analysis of this information revealed that:

- Key challenges are thought to relate to **community awareness and acceptance**, and **geographic obstacles**.
- The solutions to zero-dose challenges are mostly felt to be dependent on **effective engagement with communities**, rather than related to health systems or supply-side challenges.
- Practitioners are particularly interested in learning more about **community-related issues**.

INTEGRATION AND MICROPLANNING

A subset of participants were selected to present their zero-dose experiences, prioritizing those whose contributions related to Gavi's zero-dose **IRMMA framework**. Two predominant themes emerged from Nigeria and Uganda experiences shared, focused on **integration and microplanning**:

- **Agile planning and timely resourcing of plans** is vital to better address zero-dose challenges and sustainably increase coverage.

- **An integration approach** is especially important to catch those who have been missed completely (zero-dose) and dropouts (under-immunized), particularly given that zero-dose children often face multiple health-related vulnerabilities.

Follow up after the meeting was used to develop four in-depth case studies, two each from Nigeria and Uganda, and multiple shorter case studies.

BENEFITS OF PARTICIPATION

A quantitative and qualitative analysis of responses to a post-event questionnaire revealed high levels of satisfaction with ZDLH-X2, but also provided key insights into the nature of new learning:

- Respondents reported **new learning in a range of zero-dose-related areas**, including identifying and following up zero-dose children and missed communities, community engagement in rural areas, and community engagement in urban areas.
- A high proportion of respondents reported that they would **apply what they had learned**.
- Almost all respondents reported that their **motivation and commitment had been increased** by participation.
- Nearly all reported that they had **learned something new or surprising**.

*"I have learned to understand that **community involvement especially the influential and stakeholders in microplanning is very key for successful implementation of immunization service delivery and other health interventions**. Now I have a clear idea in committing the stakeholders to participate fully in implementing any health intervention geared towards community protection."*

EFFECTS ON PERSONAL AND PROFESSIONAL DEVELOPMENT

Quantitative and qualitative analysis of responses to the post-event questionnaire also generated important insights into the effects of participation on **personal and professional development of health workers**. Key take-aways include:

- Respondents from Nigeria and Uganda reported high levels of impact on **five aspects of personal and professional development**.
- Analysis of qualitative feedback identified impacts in **five domains** of personal and professional development – **technical knowledge, technical skills, networking benefits, personal growth and development, and vocational and career impacts**.
- These impacts have the potential to contribute to the **longer-term development of immunization programme capabilities**, including leadership and management.

*"This was a community of practice that enabled me to **think critically about the "how"** for reduction in the number of zero-dose children."*

KNOWLEDGE TRANSLATION

Analysis of questionnaire responses also examined potential evidence for **knowledge translation**, practical application of what had been learned through ZDLH-X2:

- Multiple respondents expressed an **intention to implement** activities and strategies discussed at ZDLH-X2.
- Several case studies were identified as **practical and potentially applicable local solutions**.
- Longer-term follow-up of participants could explore the **extent to which intentions were acted upon and local impacts**.

Notably, **participants identified for themselves which approaches were most relevant to their specific context and how they might be adapted to their local setting**, as this has proven to be the most difficult aspect of translating knowledge from global and national recommendations and evidence into local action.

“It was awesome to realize that one could actually track ZD children through the ANC [antenatal care] register, using the calculated EDD [expected due date]. I think we will implement that as soon as possible in our state along with all other beneficial approaches learnt.”

REFLECTIONS ON ZDLH-X2

Like ZDLH-X1, ZDLH-X2 attempted to approach evidence use by **moving beyond dissemination to promote practical application of new knowledge (knowledge translation)**. Although the post-programme feedback was collected relatively soon after the programme concluded, there are indications in participants’ responses of at least an **intention to implement new ideas**.

“I found the approach used in Uganda by targeting women who come for ANC quite interesting. The approach is very innovative and I think will go a long way in reaching zero-dose. I intend to introduce this approach to health facilities I work with during my engagement with them. This unique approach had stirred me to think out of the box in addressing the zero-dose issue.”

“I learnt how community leaders were implicated in the activities to reach zero-dose and under-immunized children. So I have also started implementing that in my area of work. I have also started talking to religious leaders and training CHWs to go to churches, schools and other social gatherings and talk to them concerning vaccination, and identify zero-dose and under-vaccinated children to vaccinate.”

The evidence from ZDLH-X1 and -X2 suggests that the peer learning approach appeals to **practitioners at all levels of the health system**. Although there has been a focus on sub-national practitioners, across ZDLH-X1 and -X2, national-level and international participants made up 30 per cent of the total, and also appeared to gain as much as their subnational colleagues from participation.

As well as appealing to a wide variety of immunization practitioners, from different countries, different health system levels, and with different years of experience, ZDLH-X1

and -X2 have provided routes to **different types of learning**. For some, knowledge has been gained on basic zero-dose issues and use of the IRMMA framework. Others have been able to identify specific ideas that they could implement locally, and have been able to discuss practical issues of implementation in ways that conventional dissemination does not allow.

A wide variety of influences on **personal and professional development** were also reported, indicating that what participants take away is dependent on their local context and personal situation. These indirect benefits will contribute to the development of **human capital** within national immunization programmes, with long-term implications for programme performance.

The information specific to Nigeria and Uganda will inform the work of **Country Learning Hubs**, providing insights into key local challenges and learning priorities. CLHs need to consider how best to mobilize the power of peer networks, a highly cost-effective way of sharing knowledge and promoting translation of knowledge into action, leveraging the **strong intrinsic motivation** of immunization professionals to improve performance and support their peers.

Finally, the findings from these peer learning events provide a way in which the **IRMMA model** can be conceptualized and applied in day-to-day practice. The focus on practical challenges in local contexts can help to turn an abstract framework into a concrete contextualized approach that supports more effective planning and action.

DATA RELATING TO NIGERIA AND UGANDA

Nigeria and Uganda were the focus countries for ZDLH-X2. Data for these countries were disaggregated to provide insights to inform the work of decision-makers in these countries.

NIGERIA

Analysis of **pre-event** questionnaire data (389 responses from Nigeria, 32.6 per cent of 1192 responses):

- **Primary zero-dose challenge:** The three most frequently selected challenges were:
 - **Community engagement and empowerment.**
 - **Addressing affordability.**
 - **Access and equity.**
- Responses from Nigeria were generally similar to the global averages.

- **Most important issues underlying zero-dose challenge:** The three most frequently selected issues were:
 - **Cultural beliefs or misconceptions.**
 - **Geographic isolation.**
 - **Inadequate immunization awareness.**
- Compared to global averages, respondents from Nigeria were more likely to select **cultural beliefs or misconceptions, conflict settings, and poverty.**

- **Most promising practices to address zero-dose challenges:** The three most frequently selected practices were:
 - **Community engagement.**
 - **Community outreach.**
 - **Engaging with religious leaders.**
- Compared to global averages, respondents from Nigeria were more likely to select **engaging with religious leaders** and **incentive programmes** for parents or care-givers.

- **Most important zero-dose topic to learn about:** The top three topics that respondents from Nigeria wanted to learn more about were:
 - **Community engagement.**
 - **Use of data.**
 - **Equity: mobile/displaced populations.**

- Based on pre-event submissions, four case studies from Nigeria were developed on **integration** and three on **microplanning** (Annex 2).

Event attendance:

- For ZDLH-X2, 313 participants were from Nigeria (39 per cent of total).

Analysis of **post-event** questionnaire data (275 responses from Nigeria, 40.6 per cent of the total number of responses):

- **Most important thing learned at ZDLH-X2:** The three most frequently selected things learned related to:
 - **Community engagement in rural areas.**
 - **Identifying and following up on zero-dose children and missed communities.**
 - **Reaching conflict-affected areas.**
- Responses from Nigeria were broadly similar to global averages.
- **Using what was learned at ZDLH-X2:** 99.6 per cent of respondents from Nigeria stated that they would use what they had learned in their work.
- **Impacts on motivation and commitment:** 98.9 per cent of respondents from Nigeria stated that ZDLH-X2 had increased their motivation and commitment.
- **Impacts on reflective practice:** 95.4 per cent of respondents from Nigeria stated that they had learned something new or surprising that had made them think differently about their work.

UGANDA

Analysis of **pre-event** questionnaire data (65 responses from Uganda, 5.5 per cent of the total number of responses):

- **Primary zero-dose challenge:** The three most frequently selected challenges were:
 - **Community engagement and empowerment.**
 - **Communication and education.**
 - **Addressing affordability.**
- Compared to global averages, respondents from **Uganda** were less likely to select **capacity building** and more likely to select **communication and education**; responses were also slightly higher for **addressing affordability**, and **monitoring, data and integration**.
- **Most important issues underlying zero-dose challenge:** The three most frequently selected issues were:
 - **Cultural beliefs or misconceptions.**
 - **Inadequate immunization awareness.**
 - **Lack of transportation.**
- Compared to global averages, respondents from Uganda were more likely to select **inadequate immunization awareness, cultural beliefs or misconceptions, limited or inconsistent access to healthcare providers, lack of transportation, informal settlements and urban poor, seasonal or transient populations, orphans and vulnerable children**, and **religious minorities**.
- **Most promising practices to address zero-dose challenges:** The three most frequently selected practices were:
 - **Community outreach.**
 - **Community engagement.**
 - **Monitoring and evaluation.**

- Compared to global averages, respondents from Uganda were more likely to select **community outreach and mobilization, monitoring and evaluation (M&E)** of coverage, **strengthening routine immunization, integration with maternal, neonatal and child health (MNCH) services, developing targeted microplans, PHC integration,** and **strengthening the cold chain**; they were less likely to select utilizing community health workers and volunteers, behavioural science and human-centred design, utilizing mobile and nomadic health teams, and incentive programmes for parents or care-givers.
- **Most important zero-dose topic to learn about:** The top three topics that respondents from Nigeria wanted to learn more about were:
 - **Community engagement.**
 - **Use of data.**
 - **Identification of innovation.**
- Compared to global averages, respondents from Uganda were more likely to select **identification of innovation.**
- Based on pre-event submissions, three case studies from Uganda were developed on **integration** and two on **microplanning** (Annex 2).

Event attendance:

- For ZDLH-X2, 66 participants were from Uganda (8.2 per cent of total).

Analysis of **post-event** questionnaire data (39 responses to post-event questionnaire, 5.8 per cent of the total number of responses):

- **Most important thing learned at ZDLH-X2:** The three most frequently selected things learned related to:
 - **Identifying and following up on zero-dose children and missed communities.**
 - **Community engagement in rural areas.**
 - **Community engagement in urban areas.**
- Responses from Uganda were broadly similar to global averages.
- **Using what was learned at ZDLH-X2:** 100 per cent of respondents from Uganda stated that they would use what they had learned in their work.
- **Impacts on motivation and commitment:** 100 per cent of respondents from Uganda stated that the event had increased their motivation and commitment.
- **Impacts on reflective practice:** 97.4 per cent of respondents from Uganda stated that they had learned something new or surprising that had made them think differently about their work.

KEY FINDINGS AND RECOMMENDATIONS

| # | KEY FINDING | RECOMMENDATIONS |
|---|---|--|
| | ZD PRACTICES | |
| 1 | Microplanning case studies highlighted the importance and feasibility of regularly revising plans to more intentionally address local ZD and under-immunized challenges, and emphasized that effective planning requires communities being involved in designing and revising interventions | <ul style="list-style-type: none"> Encourage country and sub-national practitioners to review lessons from ZDLH-X2 and other microplanning case studies, and adapt any relevant promising practices to the local context to strengthen and operationalize microplanning/revision processes that also involve communities. |
| 2 | ZD case studies showcase multiple strategies adopted to integrate immunization and other PHC services, in order to identify ZD and under-immunized and ensure they receive missing vaccination | <ul style="list-style-type: none"> Support countries and sub-national levels to apply practical lessons in integration, building on ZDLH-X2 and other integration examples (e.g. minimizing missed opportunities for vaccination, using data from other PHC services, addressing gender-related barriers) |
| 3 | Practitioners believe that community-based practices will be central to solving zero-dose challenges | <ul style="list-style-type: none"> Focus future activities on community-based practices; explore ways to identify which practices are more effective and which contextual factors are associated with success, so that practitioners are better able to identify the practices of most likely relevance to their local settings |
| | KNOWLEDGE TO ACTION | |
| 4 | ZDLH-X2 engaged nearly 1200 practitioners, 70 percent from the sub-national level and 30 percent from the national level or international; 121 had also participated in ZDLH-X1 | <ul style="list-style-type: none"> As part of strengthening how knowledge gets translated into local action, support CLHs to nurture and grow sub-national networks, especially in target districts and in line with CLH objectives, including their objective around improving evidence use. |
| 5 | Immunization practitioners shared nearly 500 zero-dose-related experiences and nearly 700 learning insights, all linked to aspects of Gavi's IRMMA framework | <ul style="list-style-type: none"> Continue refining and expanding the draft conceptual framework developed to categorize insights being shared by practitioners around the IRMMA framework (currently focused on "identify" and "reach") "Give back" new knowledge to zero-dose practitioners, not only Gavi and country practitioners Disseminate case studies exploring local innovations within CLH countries and across the wider network and use to foster discussion |

| | | |
|---|---|---|
| 6 | Almost all respondents from Nigeria and Uganda stated that they would use what they had learned in their work | <ul style="list-style-type: none"> ▪ Support more explicitly how to translate intent with actual application of new knowledge, particularly with helping CLHs achieve their evidence use objectives; this could include the development of sub-national learning networks that include follow-up approaches and promote knowledge translation/evidence use, as part of CLH collaboration |
| 7 | The major case studies from Nigeria and Uganda are possible approaches with wide applicability | <ul style="list-style-type: none"> ▪ At the country level, create opportunities for further dissemination, follow up, and peer exchange on implementation of approaches shared |
| 8 | ZDLH-X2 was seen as valuable by both subnational and national-level practitioners | <ul style="list-style-type: none"> ▪ Engage with national-level practitioners to explore how best to integrate peer learning approach into workforce development and strategy/planning |

2. INTRODUCTION

As part of the Gavi [Zero-Dose Learning Hub \(ZDLH\)](#) initiative, in September 2023 The Geneva Learning Foundation (TGLF) organized a **second inter-country online peer learning exchange** (ZDLH-X2), focusing on two ZDLH countries – **Nigeria** and **Uganda**. The event built on and extended the learnings from a first event (ZDLH-X1), which was held in May 2023 and focused on Bangladesh and Mali.

The event followed a well-established adult learning methodology utilized by TGLF in its other peer learning programmes. In advance of the meeting, practitioners were invited to share **case studies** summarizing their efforts to reach zero-dose, under-immunized and missed communities. At the event itself, a selection of practitioners provided a **brief verbal summary** of their experience. In addition, experts from Nigeria, Uganda and the global level acted as **“guides on the side”**, drawing out key themes from the presentations and probing further into the experiences described.

Since connection issues can be a challenge for potential participants in some locations, **asynchronous participation** was the primary mode of learning:

- Before the event, participants contributed their experience by answering the **pre-event questionnaire**.
- Those who were unable to watch the event could catch up by watching the recording and posting questions on their preferred social media platform (e.g. YouTube, LinkedIn, Facebook) or listen to it as an audio podcast.
- The **post-event questionnaire** then provided an opportunity for reflection, a key step to consolidate learning in a participant’s own context.

This event format aims to **leverage the practical experience and successes of frontline practitioners** working at all levels of national immunization programmes. Participants are encouraged to be highly specific about their own local challenges and needs, and the steps they have taken to address zero-dose challenges. Instead of a traditional format focusing on dissemination of promising zero-dose practices, this format was specifically designed to encourage immunization practitioners in moving from knowledge to action.

ZDLH-X2 ATTENDANCE AND PARTICIPATION

Almost 1200 practitioners registered for the event, from 56 countries; 70 percent work at the sub-national level. Registrants shared **1192 experiences** during the registration process.

The event itself was attended by 802 unique participants (56 percent working at the sub-national level), including 313 from Nigeria, 66 from Uganda and 423 from 54 other countries. As of 15 November 2023, the YouTube recording of the event had received a further 489 views, providing a “long tail” of engagement – more than a third of the total audience is participating asynchronously. The level of feedback was high, with 678 post-

event questionnaires received by 1 October 2023, including from participants who watched the recording.

CHARACTERISTICS OF RESPONDENTS

The 1192 pre-event questionnaire respondents were drawn from at least 56 countries, mostly in sub-Saharan Africa (Annex 3, Figure 1). The two most highly represented countries were Nigeria (32.6 percent of respondents) and the Democratic Republic of the Congo (DRC, 10.8 percent); Uganda accounted for 5 percent of respondents. All levels of the health system and years of experience were well represented (Figure 1; Annex 3, Figure 2, 3); 40.5 percent of respondents worked for a ministry of health and 18.2 percent for an NGO. The ratio of male to female respondents was approximately 3:1.

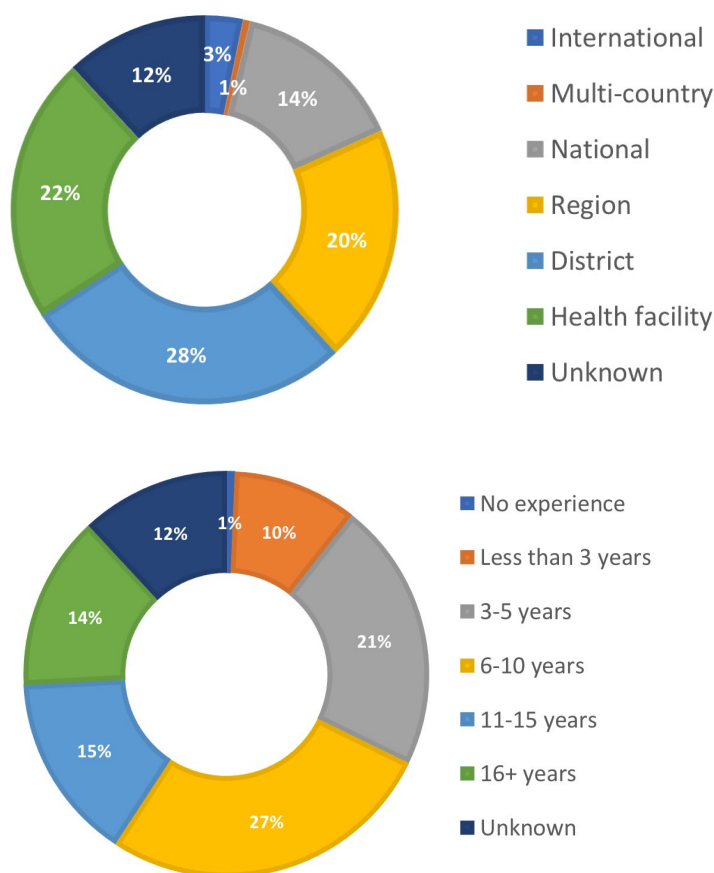


Figure 1: Characteristics of pre-event questionnaire respondents.

PURPOSE OF REPORT

A summary report was published after the ZDLH-X1 event, and had a particular focus on experiences shared by participants from Bangladesh and Mali. This current report captures information from both ZDLH-X1 and -X2 and presents an analysis of:

- Combined pre-event questionnaire data from ZDLH-X1 and ZDLH-X2, shedding light on the nature of zero-dose challenges, methods being adopted to address them and learning needs.
- Examples of zero-dose practice, including detailed case studies on microplanning and integration from Nigeria and Uganda.

- Learnings specific to ZDLH-X2 focus countries, Nigeria and Uganda.
- Perceived impacts on personal and professional development gained by participation in ZDLH-X2.
- Ways in which participation in ZDLH-X2 has influenced respondents' zero-dose practice.

3. ZERO-DOSE CHALLENGES AND SOLUTIONS

A combined analysis of pre-event questionnaire data from both ZDLH-X learning events has provided insights into the **nature of zero-dose challenges**, their **characteristics in ZDLH focus countries**, and **approaches being taken to address them**.

For ZDLH-X2, respondents reported whether they worked in **target districts** that have been prioritised by Country Learning Hubs in Nigeria and Uganda, allowing for some disaggregated analyses (although numbers are relatively small for these target districts).

Key take-aways include:

- Although around three-quarters of respondents reported the existence of a **microplan including a zero-dose component**, there is some scope to promote zero-dose microplanning, particularly in Mali – only 70.4% of respondents from Mali reported the existence of a microplan with a zero-dose component.
- Key challenges are thought to relate to **community awareness and acceptance of vaccination**, and **geographic obstacles**.
- The solutions to zero-dose challenges are mostly felt to be dependent on effective **engagement with communities**.
- Practitioners are particularly interested in learning more about **community-related issues**, such as partnering with religious/traditional/other leaders, use of community health volunteers, working with women's peer groups, leveraging community events for immunization, caregiver incentives.
- Although responses from **Nigeria and Uganda** broadly track global averages, there are some subtle differences that provide insights into local priorities in these countries.

EXISTENCE OF A MICROPLAN WITH A ZERO-DOSE COMPONENT

Across all respondents, 73.4 percent reported having a workplan or microplan describing ongoing activities to reach zero-dose or the hard-to-reach; for ZDLH target countries, this figure ranged from 70.4 percent (Mali) to 89.2 percent (Uganda); Bangladesh and Nigeria were intermediate (85.7 per cent and 84.8 per cent, respectively). In ZDLH target districts, the figure was generally slightly higher (Annex 3, Figure 4).

PRIMARY CHALLENGE

The most commonly cited primary challenge was **community engagement and empowerment** (19.8 percent of survey respondents), followed by **access and equity** (14.6 percent) and **communication and education** (14.0 percent) (Annex 3, Figure 5). These varied somewhat between target countries (Figure 2; Annex 3, Figure 6):

- Respondents from **Mali** more frequently cited **access and equity** and **community engagement and empowerment** as a primary challenge.

- Respondents from **Uganda** were less likely to select **capacity building** and more likely to select **communication and education**; responses were also slightly higher for **addressing affordability**, and **monitoring, data and integration**.
- Respondents from **Bangladesh** were more likely to select **monitoring, data and integration** and less likely to select **community engagement and empowerment**.
- Responses from Nigeria were generally similar to the global averages, although were slightly higher for **community engagement and empowerment, addressing affordability**, and **monitoring, data and integration**.

More variation was seen in ZDLH target districts in Nigeria and Uganda, but respondent numbers were relatively small (Annex 3, Figure 7).

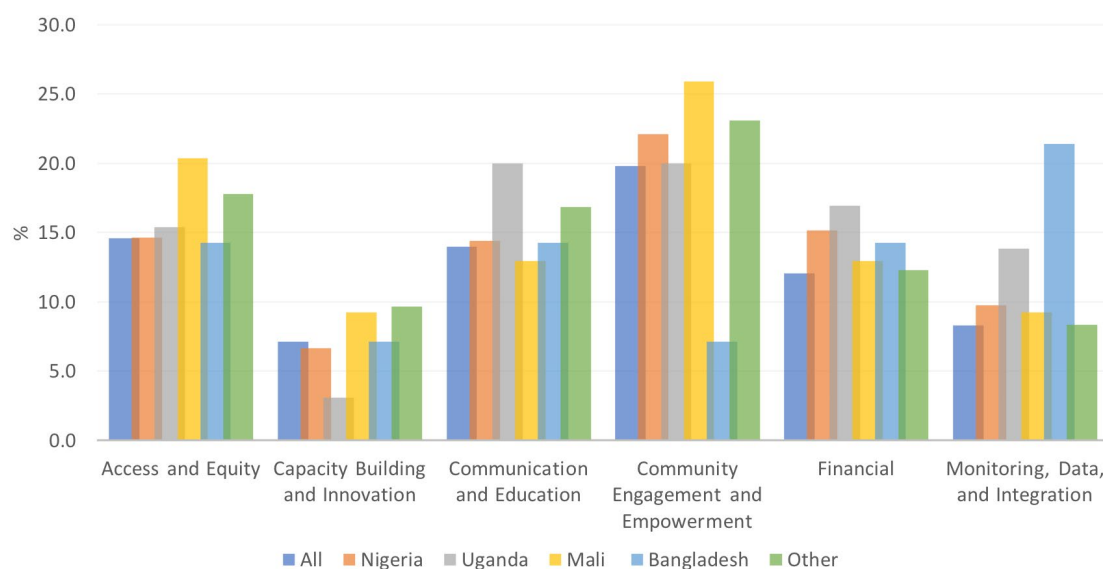


Figure 2: Selection of primary challenge by country.

MOST IMPORTANT ISSUES UNDERLYING LOCAL ZERO-DOSE CHALLENGE

Across all respondents, the three most commonly selected issues were:

- **Cultural beliefs or misconceptions and lack of trust** (38.6 percent of survey respondents).
- **Isolated populations due to geographic constraints** (34.9 percent)
- **Inadequate immunization awareness** (33.8 percent) (Annex 3, Figure 8).

Some differences were seen across target countries (Figure 3; Annex 3, Figure 9):

- **Nigeria:** More likely to select most options, particularly cultural beliefs or misconceptions, conflict settings, and poverty.
- **Uganda:** More likely to select inadequate immunization awareness, cultural beliefs or misconceptions, limited or inconsistent access to healthcare providers, lack of transportation, informal settlements and urban poor, seasonal or transient populations, orphans and vulnerable children, and religious minorities.

- **Mali:** More likely to select isolated populations due to geographic constraints, conflict settings, nomadic populations, poverty, seasonal or transient populations, and gender inequity.
- **Bangladesh:** More likely to select limited or inconsistent access to healthcare providers, limited healthcare infrastructure, informal settlements and urban poor, language barriers and health illiteracy, orphans and vulnerable children, migrant workers, and ethnic minority and indigenous communities, and less likely to select cultural beliefs or misconceptions, conflict settings, nomadic populations

Responses by target district were much more variable, but numbers are relatively small (Annex 3, Figure 10).

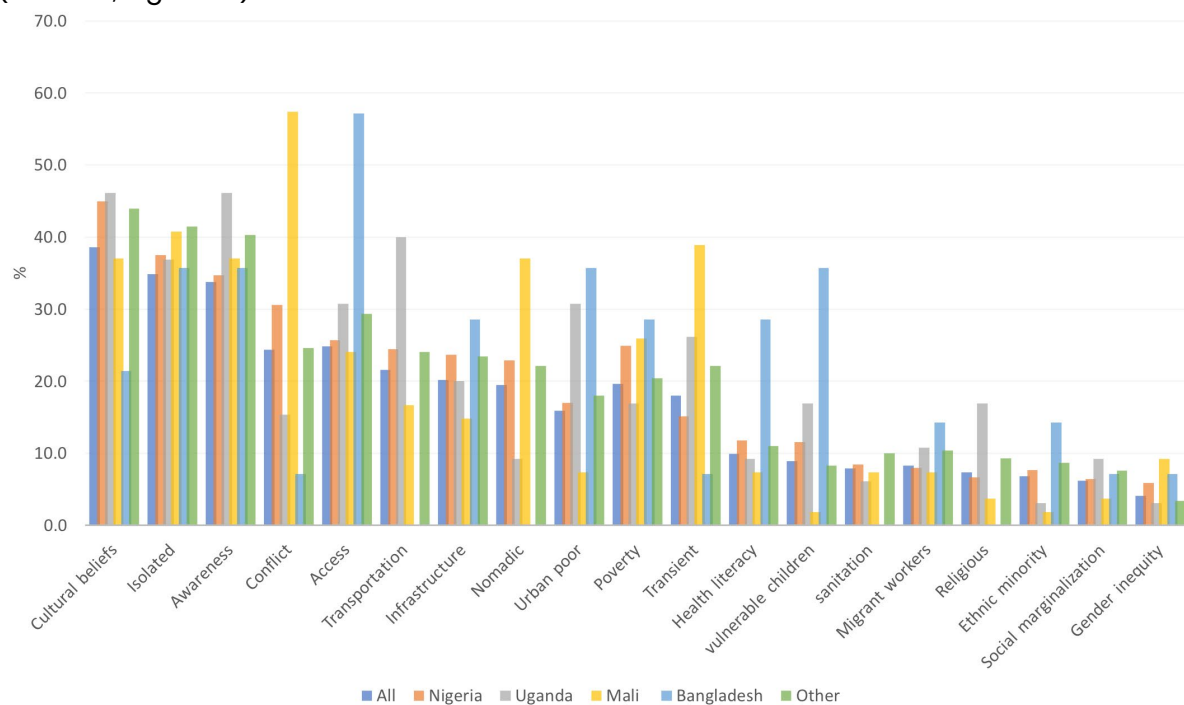


Figure 3: Most important underlying issue by country.

MOST PROMISING PRACTICES

In terms of the most promising practices undertaken to reach zero-dose children and missed communities, across all respondents, the three most commonly selected were:

- **Community engagement approaches** (19.2 percent).
- **Community outreach and mobilization** (17.9 percent).
- **Utilizing community health workers and volunteers** (15.2 percent) (Annex 3, Figure 11).

These preferences may reflect the fact that a large proportion of responses are from sub-national practitioners, who may have a particular interest in community-level activities.

Some differences were seen between target countries (Annex 3, Figure 12):

- **Nigeria:** More likely to select engaging with religious leaders and incentive programmes for parents or care-givers.

- **Uganda:** More likely to select community outreach and mobilization, monitoring and evaluation (M&E) of coverage, strengthening routine immunization, integration with maternal, neonatal and child health (MNCH) services, developing targeted microplans, PHC integration, and strengthening the cold chain; less likely to select utilizing community health workers and volunteers, behavioural science and human-centred design, utilizing mobile and nomadic health teams, and incentive programmes for parents or care-givers.
- **Mali:** More likely to select community engagement, community outreach and mobilization, utilizing community health workers and volunteers, involving religious and community leaders, strengthening routine immunization, catch-up campaigns, improving access to transportation, utilizing mobile and nomadic health teams, and less likely to select missed opportunities for vaccination, collaboration with NGOs, integration with MNCH, collaboration with schools
- **Bangladesh:** More likely to select missed opportunities for vaccination, MNCH integration, collaboration with CSOs and use of electronic immunization registries (although numbers are relatively small).

More significant differences were seen between target districts in Nigeria (Annex 3, Figure 13), but respondent numbers are relatively small.

MOST IMPORTANT TOPIC

In terms of the most important topic that respondents were interested in learning about from colleagues, across all respondents, **community-related issues** were by far the most popular (43 percent), followed by **use of data** (11.5 percent), and **mobile, nomadic, and displaced populations** (7.2 percent) (Annex 3, Figure 14). Some differences were seen between countries (Figure 4; Annex 3, Figure 15):

- **Mali:** Respondents were particularly interested in community-related issues.
- **Nigeria:** Respondents were slightly more likely to select use of data.
- **Uganda:** Respondents were more likely to select identification of innovation.
- **Bangladesh:** Respondents were more likely to select use of data, leadership and management, working with CSOs, and new partners (although numbers are relatively small).

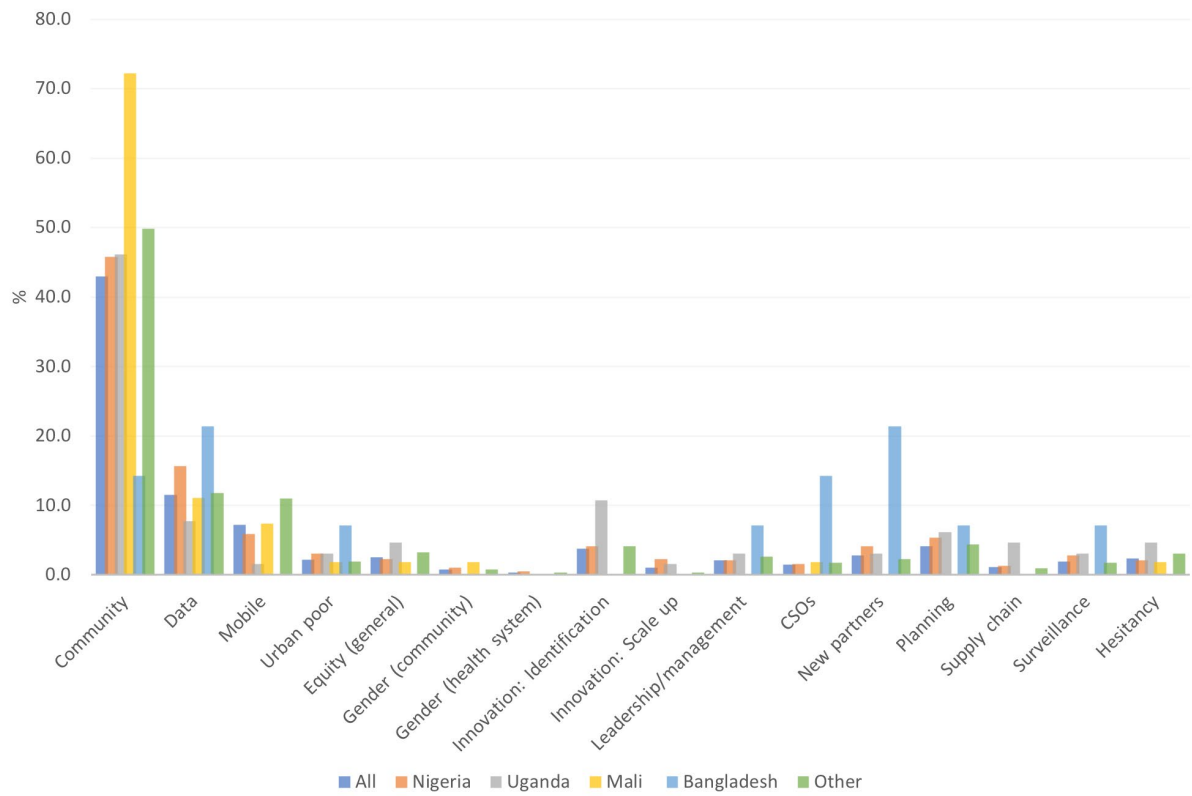


Figure 4: Most important topic for learning by country.

4. EXPERIENCES SHARED BEFORE THE EVENT

Contributions suitable for **case studies** were first identified by reviewing pre-event zero-dose experiences shared in an open process (anyone could contribute) by more than 500 practitioners. They were selected on the basis of Gavi's priority learning questions and finalized through dialogue between their contributors and global experts. During the event (synchronous participation) and via listening/posting questions after the event on YouTube and other channels (asynchronous participation), immunization practitioners raised **questions** that were then sent to case study presenters. Most questions were answered, but some important ones were not – and are relevant to raise in ongoing peer learning events. Detailed questions are in Annex 1.

The overall approach taken has **maximized cross-learning** and sharing of realistic challenges and what solutions are feasible in resource-constrained environments. The approach taken with ZDLH-X aims to move beyond dissemination, and help immunization practitioners begin the knowledge-to-action journey on these sub-set of zero-dose topics (knowledge translation/evidence use). However, the virtual nature of ZDLH-X events makes it difficult to track translation of knowledge to action in-country. ZDLH countries may want to consider how to encourage in-country follow up via their CLHs on key learnings.

The experiences submitted highlighted how immunization practitioners are working to solve key zero-dose challenges in different settings.

Two predominant themes emerged from **Nigeria and Uganda experiences**:

- **Agile planning and timely resourcing of plans** are vital to better address zero-dose challenges and sustainably increase coverage.
- **An integration approach** is especially important to catch those who have been missed completely (zero-dose) and dropouts (under-immunized), particularly given that zero-dose children often face multiple health-related vulnerabilities.

Within these general areas, an analysis of pre-event submissions highlighted a range of practical strategies that practitioners have adopted in their local contexts. Recurring themes included efforts to **include communities in microplanning** to more intentionally address local zero-dose and under-immunized children challenges and various strategies to use **families' contacts with health systems** as opportunities to assess immunization status and to immunize children who are not fully vaccinated, as illustrated by the following examples and insights.

REVISING MICROPLANS: PUTTING COMMUNITY INVOLVEMENT AT THE CENTRE

- Using community health volunteers (village health teams, VHTs) to better identify underserved villages, and then going **house-to-house to get detailed information on births and zero-dose children** in the CLH focus district of Kasese in **Uganda**.
- Forming **routine immunization committees** with communities in the catchment area and jointly **revising the health facility catchment area map** to ensure all remote and “forgotten” locations are added; **jointly reviewing root causes** and key barriers in accessing immunization services; **line-listing zero-dose children** and then implementing an **“Every Opportunity Strategy”** using traditional birth attendants and traditional barbers to identify and share names of newborns on an ongoing basis in the CLH-focus state of Sokoto in **Nigeria**.
- Working with **traditional leaders and women’s collectives** to conduct a **micro-census** to identify children and their vaccination status, triangulating that with facility immunization registers, and using the findings to track down any zero-dose or under-immunized children in CLH-focus state of Bauchi in **Nigeria**.
- Using microplanning to develop a facility **daily implementation plan (DIP)** for health teams and their communities to use to guide and revise weekly immunization sessions, linked to a **regularly updated zero-dose line-listing** in the CLH-focus state of Kano in **Nigeria**.

MISSED OPPORTUNITIES IN VACCINATION: USING SERVICE INTEGRATION STRATEGIES

- For larger health facilities/secondary hospitals, **linking immunization with other PHC services** such as out-patient departments, antenatal care (ANC), family planning, and nutrition services (e.g. community-based management of acute malnutrition, CMAM) to find and reach zero-dose and under-immunized children in the CLH-focus state of Sokoto in **Nigeria**.
- Using a similar approach in the CLH-focus state of Kano in **Nigeria** and in Chattogram City Corporation, **Bangladesh**.

UTILIZING DATA FROM OTHER PHC SERVICES

- Using **ANC data** to track expected delivery dates of mothers, with **community-based follow up of babies born outside facilities** in Kotido district, **Uganda**.

DESIGNING SERVICES FOR BUSY CARE-GIVERS

- **Working with the community** to help solve a challenge in a **fishing landing site** where people are always busy, and co-designing an outreach strategy where community health volunteers (VHTs) notify health workers of times when children are available for home vaccination in the CLH-focus district of Kasese in Uganda.

USING COMMUNITY EVENTS TO IMPROVE ATTENDANCE AT IMMUNIZATION SESSIONS

- **Collaborating with community leaders at religious services, funerals, and other community events** to reinforce messages around immunization session schedules and target age groups in Kumi district in **Uganda**.

- **Organizing an immunization catch-up session at a large festival** involving more than 21 villages in the security-compromised area of Bamba, **Mali**, and using that experience to run similar sessions at other large gatherings/events.

REACHING CARE-GIVERS FROM INSECURE AND CONFLICT-AFFECTED AREAS

- Taking advantage of locations where care-givers in conflict-affected areas congregate, such as **festivals, naming ceremonies, and out-patient departments** at specific secondary hospitals; using trained women peer volunteers to discuss immunization and vaccine preventable-diseases in the context of conflict and outbreaks in the CLH-focus LGA of Maiduguri in Borno State, **Nigeria**; using a similar approach in Bamba, **Mali** (described in above section on community events).

ADDRESSING GENDER-RELATED BARRIERS

- Working with **traditional leaders and women's collectives** to identify and vaccinate zero-dose and under-immunized children in CLH-focus state of Bauchi in **Nigeria**.
- Using trained **women peer volunteers** to discuss immunization and vaccine-preventable diseases in the context of conflict and outbreaks in the CLH-focus LGA of Maiduguri in Borno State, **Nigeria**.
- Adapting the **urban immunization strategy tool and using women's groups** to help identify zero-dose children during home visits in 11 urban communities in Sikasso, **Mali**.

PROMOTING MATERNAL, NEWBORN, AND CHILD HEALTH (MNCH) WEEKS

- Using the twice-a-year opportunity of **MNCH Weeks** to identify and vaccinate zero-dose and under-immunized children in **Nigeria**.
- Building on **World Immunization Week** to undertake coordinated special catch-up activities in **Bangladesh**, which reached almost three million unimmunized or under-immunized children between 2020 and 2022.

Following the event, a subset of participants were contacted and more detailed case studies developed (Annex 2 includes four detailed and eight summary case studies).

SUPPORTING MATERIALS AND RESOURCES

Microplanning and integration are recurring global themes in addressing zero-dose and under-immunized children challenges. Resources have been developed in each of these areas, covering planning, implementation, monitoring/measuring, and scale-up implications:

1. [Microplanning](#) that addresses zero-dose challenges.
2. [Integration](#) of immunization and other services.
3. Reducing [missed opportunities for vaccination](#) through a focus on integration.

NEXT STEPS:

- *Country-specific case studies will be shared with the Nigeria and Uganda Country Learning Hubs for in-country use, similar to what was done with case studies from Bangladesh and Mali after ZDLH-X1. The Uganda Country Learning Hub has applied ZDLH-X2 insights, based on their country-specific case studies, to inform questionnaire design for their rapid assessment, which is in progress.*
- *Experiences shared by practitioners will be circulated among participants and potentially made more widely available on the web.*

5. QUESTIONS AND ANSWERS (Q&A)

Formal guidance may fail to be adopted or adapted by practitioners if there are no easy-to-use mechanisms that facilitate translation of knowledge into practice. With ZDLH-X1 and ZDLH-X2, we paid attention to questions asked before, during, and after the live event, which enabled participants to seek clarification or request additional details.

As there were too many questions to answer during the event itself, we produced an FAQ section that addresses specific questions and builds more comprehensive answers.

This is an example of **knowledge translation at the point of need**, helping practitioners obtain answers to specific questions rather than having to rely on more generalized and abstract guidance.

As at the ZDLH-X1 event in May 2023, during ZDLH-X2, the online platform's "chat" and Q&A functions were well used by participations, who asked questions relating to case studies presented or about zero-dose challenges more generally. Presenters and "guides on the side" were able to answer some questions or provide further details during the session. Additional questions came from practitioners who participated asynchronously, who viewed the event recording and asked questions on YouTube or other platforms.

General questions and their responses are included in Annex 1, building on the questions asked during the ZDLH-X1 event. Aside from questions around definitions of zero-dose terms, new questions centred around tracking and following up zero-dose children in migratory populations and among the conflict-affected. Questions specific to the case studies are embedded in the cases themselves in Annex 2, with the majority of answers provided by the case study owners.

Case study-related questions included topics such as:

- Methods to better understand **whether an intervention is working or not**.
- **Management of data related** to a specific zero-dose intervention.
- Tracking and following up on zero-dose children who are **vaccinated in a larger health facility but are from other catchment areas**.
- Working with **traditional leaders**.
- The role of **incentives** in solving zero-dose challenges, including incentives for community health volunteers and care-givers of zero-dose children.
- **Handling rumours** in locations with high numbers of zero-dose children.
- **Age limits** on vaccination, especially if children are over 1 year of age.
- Improving **funding availability** for approved and revised micro-plans.

Following the event, global experts with extensive field experience and the participants sharing experiences provided responses to the queries raised (general questions are included in Annex 1 and case study-related questions in Annex 2).

6. WHAT PARTICIPANTS LEARNED FROM ZDLH-X2

Feedback on ZDLH-X2 was collected using a questionnaire including both qualitative (open-ended) and quantitative questions. The design of this questionnaire was intended to go beyond typical post-event feedback focusing primarily on learner satisfaction, which seldom correlates with learning outcomes or improved performance.

Instead, the questions sought to probe the effects of participation across a range of domains, including acquisition of new knowledge, initiation of new actions (or intention to act), and changing mindset. This approach, rooted in a conceptual framework developed by [Etienne Wenger and colleagues](#), seeks to identify effects that are likely to be closely correlated with more effective translation of knowledge to action.

An analysis of post-event questionnaire data from ZDLH-X2 learning events has provided insights into the **areas where participants felt that they gained or strengthened understanding**, as well impacts on issues such as **commitment and motivation**.

Key take-aways include:

- Respondents reported **new learning in a range of zero-dose-related areas**, including identifying and following up zero-dose children and missed communities, community engagement in rural areas, and community engagement in urban areas.
- A high proportion of respondents reported that they would **apply what they had learned**.
- Almost all respondents reported that their **motivation and commitment had been increased** by participation.
- Nearly all reported that they had **learned something new or surprising**.
- **Knowledge translation:** It is significant that **participants identified for themselves which approaches were most relevant to their specific context and how they might be adapted to their local setting**, as this has proven the most difficult part of turning global and national recommendations into local action.

CHARACTERISTICS OF RESPONDENTS

A total of 678 post-event survey responses were received, from respondents in 48 countries. Participants from Nigeria represented 41 per cent of respondents and those from Uganda made up 6 per cent of respondents (Annex 4, Figure 1). Most respondents (61 percent) work at the sub-national level, but national-level immunization staff represent over a quarter of the respondents, indicative of learning by national planners as well as implementers (Figure 5; Annex 4, Figure 2).

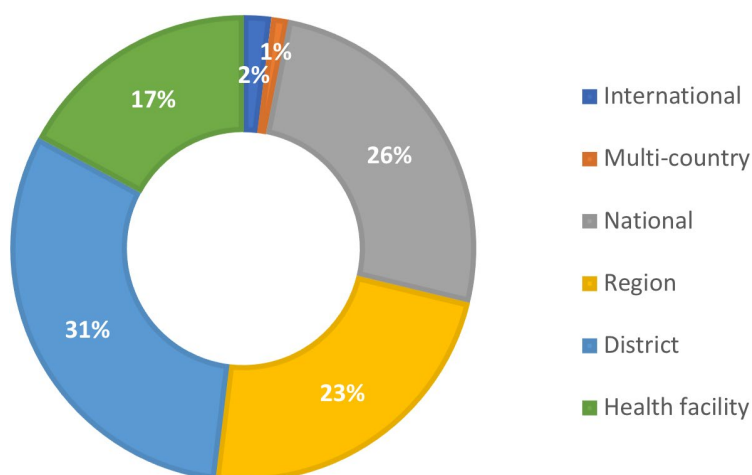


Figure 5: Characteristics of post-event survey respondents.

USING WHAT WAS LEARNED

Respondents reported a **very high likelihood of using what they had learned** at ZDLH-X2:

- All respondents: 99.7 per cent.
- Nigerian respondents: 99.6 per cent.
- Ugandan respondents: 100 per cent.

This is explored further in Section 8.

MOTIVATION AND COMMITMENT

Nearly all respondents reported that **participation had increased their motivation and commitment**:

- All respondents: 99.5 per cent.
- Nigerian respondents: 98.9 per cent.
- Ugandan respondents: 100 per cent of respondents.

A subset of 121 respondents to the ZDLH-X2 post-event questionnaire attended both ZDLH-X1 and -X2. All (100%) of these respondents reported using what they had learned and having increased motivation and commitment.

IMPACT ON THINKING

There were **very high levels of agreement** with the statement “I learned something new or surprising that made me think differently about my zero-dose work”:

- All respondents: 94.8 per cent.
- Nigerian respondents: 95.4 per cent.
- Ugandan respondents: 97.4 per cent.

These findings suggest that the ZDLH-X approach is achieving impact across the full range of participants, irrespective of geography, level in the system, or years of experience. Although an important focus is on implementation at the sub-national level,

this suggests that the events are also beneficial for those at higher levels of the system with supervisory, managerial and leadership responsibilities.

For the 121 respondents to the ZDLH-X2 post-event questionnaire who attended both ZDLH-X1 and -X2, the corresponding figure was slightly higher than the all-respondents' average for ZDLH-X2 attendees (95.9 per cent).

PERCEIVED VALUE OF ACTIVITIES – QUALITATIVE FINDINGS

The post-event questionnaire enabled participants to feed back on the **insights they had found most useful and noteworthy**. As well as improving some participants' understanding of fundamental issues relating to zero-dose challenges, this feedback also revealed important new learning on practical strategies for addressing zero-dose challenges, including approaches related to **microplanning and integration**.

WHAT PARTICIPANTS LEARNED ABOUT ZERO DOSE

Basic knowledge of zero dose and IRMMA: Participants described gaining a better understanding of the definition of zero dose. Some had their first introduction to the IRMMA framework. Several respondents said that they had learned more about strategies to identify and reach zero-dose populations. Others said that they had learned more about the scale of the zero-dose problem and the about the locations where they are typically found. These findings suggest that **familiarity with zero-dose issues remains low in some settings**.

"I learned a lot about the concept of zero-dose and its implications for immunization. One of the most interesting and surprising things I discovered was the extent of the problem and the number of children who have not received any routine vaccinations. It made me realize the urgency and importance of addressing this issue to improve public health."

"[I learned that] zero-dose children are not just in rural underserved settlements but also found in urban and peri urban settings."

"I learned about the IRMMA framework which has become my guiding principles towards ZD programme/immunization services."

Community engagement: There was widespread recognition that **community engagement** was central to the zero-dose challenge. Key learning highlighted included the importance of engaging with **community "gatekeepers"** – religious leaders, community leaders, village heads, traditional rulers and other persons of influence in the community.

"The use of community gatekeepers such as village heads, traditional rulers, religious leaders, etc. to facilitate and disseminate information on the need for immunizing the zero-dose and unimmunized children. It opened my eyes to the extent the gatekeepers can influence the masses in accepting immunizations of their children."

Respondents referred to engaging with **specific social groups**, including women's groups. The importance of **engaging with men**, often the key decision-makers in households, was also stressed.

Taking advantage of **special occasions** in communities, such as festivities or naming ceremonies, was commonly cited as a novel approach that could be readily adopted.

"What I found most interesting was community engagement strategy which utilizes the opportunity of celebrations such as child naming, dedication and wedding to reach out to caregivers and women of marriageable age and educate them on importance of child vaccination. I will adopt this unique method in my community engagement plans to identify and reach zero-dose children in the rural communities. What I think differently about health care is that health care is gradually moving from the health facilities to the people's homes and families, to ensure equitable access to health services especially child vaccination/immunization."

Respondents also highlighted learning relating to the **involvement of communities in microplan development**. Communities were noted to have the best understanding of target populations. In addition, this level of involvement was thought able to promote community ownership of vaccination activities.

*"Community participation will help reduce zero-dose, because **all births in the community, they are well known by the community members.**"*

*"In community engagement, it is vital to identify **key persons in the community and the community leadership so they own the programme.**"*

In addition, respondents highlighted some **specific practices** that they had learned about, including giving thought to the **location of vaccination sites**, novel incentives to encourage **participation of men** in vaccination activities, and **engaging with CSOs**.

*"I learned the challenge the scholar went through trying his best to **make sure immunization centres are located in each community**, whereby the nursing mothers are to walk into the centre from their homes without spending transport fare because most of their nursing do not have much financially and that is one of the excuses they give for not completing their children's immunization dose."*

*"What I can do different in my context of work is to now to encourage mothers bringing their children for vaccination to **come with their husbands to accompany them to the health centres** and telling them **anyone coming with their husbands will be serve first.**"*

*“Learning about the various ways CSOs are supporting immunization and innovations. **Realized that CSOs can support development and implementation of microplanning.**”*

New approaches to microplanning: Respondents highlighted new learning about multiple aspects of microplanning. Commonly mentioned was the **involvement of communities in microplanning** and adopting a human-centred approach.

*“I now think that health care intervention should include **micro-planning with community leaders, religious and other stakeholders in the community** to ensure that real issues or barriers are identified and the interventions are community driven and supported. This ensures sustainability of the intervention and this is what I will now do differently in my work.”*

Cited benefits of this strategy included a **better understanding of the root causes** of under-immunization and a **greater sense of ownership** of immunization activities.

*“What I found most interesting was the fact of using a community-centred approach to do microplanning. Thus giving the stakeholders (village health teams, pastors, quarter heads, community health volunteers etc) a sense of belonging and **making them provide all the root causes** leading to increased under-immunization and zero-dose children in hard-to-reach areas which can be leveraged upon to increase vaccination coverage.”*

*“What I learned was that, **community engagement in microplanning for immunization outreach services makes the community own the activity** leading to full participation and involvement health service delivery.”*

It was recognized that **mapping of target areas** was a critical aspect of microplanning, and could underpin **tailored approaches to reach different communities**. Some respondents highlighted the application of **GIS technologies** in this mapping.

*“In Tanzania we realized **some of the zero dose are found in new emerging settlements whereas services are not yet there**. So, it is crucial to map challenges as we work to identify the cause of these group of ZD and underserved communities.”*

*“Mapping zero-dose children by settlement and **developing tailored strategies considering the different peculiarities of the region** is the way to go; having one method for all may not be the best approach.”*

Several respondents also highlighted the importance of **taking microplanning seriously**, updating plans each year rather than just “cutting and pasting” from year to year. Some noted the approach taken to ensure disadvantaged groups, such as **those with disabilities**, are not left behind.

*"I was amazed how the personal experience of one of the speakers translated into **an approach to reach people living with disabilities** and got them immunized."*

Making use of data: Respondents referenced the importance of **using data to identify zero-dose populations**, and to **monitor efforts to reach them**. It was noted that this requires a strong **culture of data use at the facility level**, which may require **capacity building** and/or **supportive supervision** from the district level. **Triangulation of data** from several sources was also recognized to be important.

*"It is great **to triangulate the different data sources including other programs and not only for EPI**. The lesson learnt **is having a committed team at the health facility that will ensure use of data for decision making**."*

*"Continuous monitoring and evaluation **needs to be supported in lower health facilities by district heads of departments** and partners to ensure smooth running of activities."*

Integration of immunization and other activities: Respondents identified several aspects of **integration** relevant to zero-dose work. The description of **integration with antenatal care**, with community follow up, struck a chord with many participants.

*"What I find most interesting is what my colleague shared from Uganda in vaccinating children by following **contact tracing of each pregnant woman** at her 9 month, and mobilizing community aids to trace those that delivered at home to be also vaccinated. This method is helpful to me and I will put it in to my practice in combating zero-dose and under-immunized children."*

Also highly referenced were approaches based on **reducing missed opportunities for vaccination/MOV (missed opportunities tracking, adapted locally as MOSIT or MOT)**. Multiple different contacts with the health system were seen as potential opportunities to check the vaccination status of children and to direct them towards catch-up services.

*"What I also find very interesting and surprising (because I haven't seen it very often in secondary hospitals and larger health facilities) is to **have front desk officers who screen all clients and refer them with referral slip to all services they can get (including immunization)**."*

"[I] learned and understood the concept of Missed Opportunity and Service Strategy (MOSIT), which will enable me reach the ZD children and again routine data collection."

The opportunity to link up with other programmes was seen as a way of addressing **resource shortages**.

*"The MOSIT [Missed opportunity service integration] and MOT [Missed opportunity tracking] approach are great **but can be integrated with the TB/HIV program**"*

where they have case managers to accompany the mothers to the immunization points. This will take care of shortage of staff that was a challenge in the presentations and also prevent missed opportunities in the facilities.”

More generally, **maternal, neonatal and child health programmes** were seen as important potential partners for integrated activities.

*“What struck me most was the **power of collaboration and shared knowledge** among zero-dose practitioners from around the world. Hearing diverse strategies and challenges from different countries was eye-opening. I was particularly surprised by the innovative approaches employed in Uganda and Nigeria, such as using ANC data for birth and vaccination follow-up, and integrating immunization with other healthcare services.”*

*“It was surprising to see **the great use of integration for Maternal, Newborn, and Child Health (MNCH)** to ensure zero doses in the community.”*

Respondents also highlighted the value of **coordination with immunization campaigns**, such as those for **polio**, as an approach for identifying under-vaccinated and zero-dose children during door-to-door activities.

*“I learned that **leveraging on existing community-based networks** is the best way to identify and reach ZDC. I will **be using the polio SIAs team** to try and identify communities with high level of ZDC.”*

7. EFFECTS ON PERSONAL AND PROFESSIONAL DEVELOPMENT

The post-event questionnaire generated quantitative and qualitative data on **impacts on personal and professional development**. Five quantitative questions probed different aspects of personal and professional development, while open-ended prompts enabled respondents to reflect on how their personal and professional development had been affected by participation.

Key take-aways include:

- Respondents from Nigeria and Uganda reported high levels of impact on **five aspects of personal and professional development**.
- Analysis of qualitative feedback identified impacts in **five domains** of personal and professional development – **technical knowledge, technical skills, networking benefits, personal growth and development, and vocational and career impacts**.
- These impacts have the potential to contribute to the **longer-term development of immunization programme capabilities**, including leadership and management.

QUANTITATIVE FINDINGS

Respondents were asked to say how much participation had affected **five aspects of their personal and professional development**. Responses were provided on a Likert scale from 1–6, with a “1” indicating strong disagreement and a “6” indicating strong agreement. Reported scores showed high levels of perceived impacts on personal and professional development (Figure 6; Annex 4, Figure 3).

The smallest perceived impact was on **development of social connections**. This was also seen in feedback following ZDLH-X1 event, and likely reflects the absence of networking activities during the event.

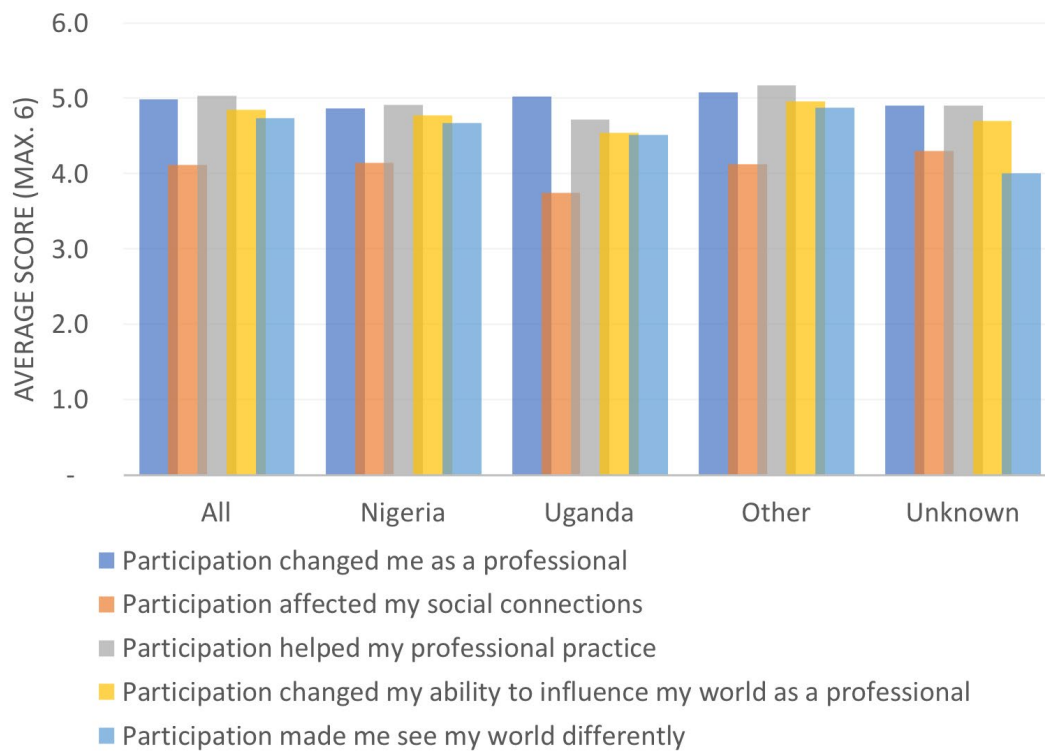


Figure 6: Perceived impacts of participation at ZDLH-X2, broken down by country.

The patterns of responses were broadly similar across focus local government areas (LGAs)/districts in Nigeria and Uganda (Annex 4, Figure 4). Collapsing the four average scores to a single “average of the averages” (excluding the “Participation affected my social connections” outlier) revealed that the most favourable scores were from participants in Kumbotso (average 5.03) and Wamakko (4.91) in Uganda, and the least positive were from participants in Ganjuwa (4.24) and Jere (4.60) in Nigeria. The distribution in Likert scores was similar between countries (Annex 4, Figure 5).

A subset of 121 respondents **attended both ZDLH-X1 and ZDLH-X2 events**. Average scores for this group were very slightly higher for all four aspects of professional development (Figure 7; Annex 4, Figure 6). This could represent evidence of cumulative benefits of participation in more than one event; alternatively, people who attended both events may be particularly positive about impacts on personal and professional development.

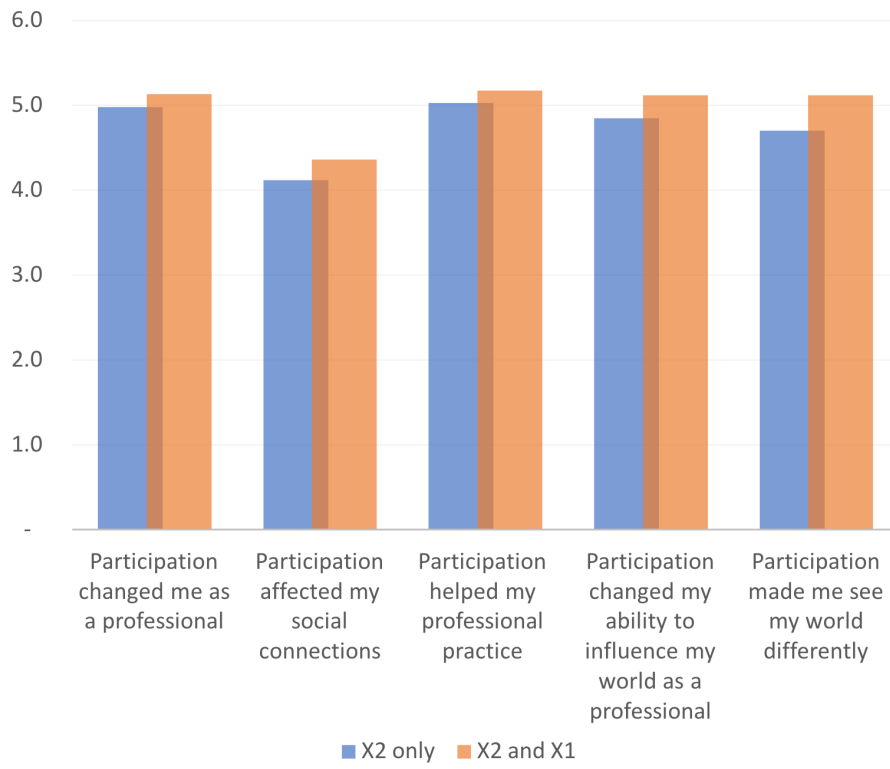


Figure 6: Perceived impacts of participation at ZDLH-X2, for attendees of ZDLH-X2 or those attending ZDLH-X1 and -X2.

PERCEIVED VALUE OF ACTIVITIES – QUALITATIVE FINDINGS

The post-event questionnaire enabled participants to reflect on their personal and professional development, through open-ended responses to the five Likert-scale questions.

Some of the learning reported by participants may seem **very basic**, and assumed by global technical experts to be universally known. These findings challenge such assumptions.

Furthermore, they also indicate that **participants’ learning experiences are highly individualized** – not only are participants from a wide variety of backgrounds and levels of experience benefiting from the peer learning approach, but the platform is enabling participants to **derive benefits according to their own specific needs**. Rather than being presented with a fixed product, they are gaining access to a platform through which they can engage, exchange, and probe practicalities with fellow practitioners. The ZDLH-X1 and -X2 events have kick-started this process, but facilitating continuing peer engagement, for example through CLHs, would help to further drive knowledge to action.

A coding scheme was developed to draw out themes from these qualitative responses. This coding scheme includes **five broad categories**:

- **Impact on technical knowledge.**

- **Impact on technical and transferable skills.**
- **Networking benefits.**
- **Personal growth and development.**
- **Vocational and career impacts.**

Within each of these categories, multiple subcategories have been defined.

Impact on technical knowledge: As discussed in Section 6, some respondents referred to their improved understanding of the zero-dose concept.

*"It changed my notion of the **differences between zero dose and herd immunity**. Thinking about vaccinating a large number of children to obtain herd immunity is entirely different from zero-dose."*

One of the most commonly references impacts in this area related to learning about **strategies and practical approaches** for reaching zero-dose children and missed communities.

*"I have learned to understand that **community involvement especially the influential and stakeholders in microplanning is very key for successful implementation of immunization service delivery** and other health interventions. Now I have a clear idea in committing the stakeholders to participate fully in implementing any health intervention geared towards community protection."*

*"As a health professional, this hub made me understand that **the integration of services in health centres** effectively contributes to catching up with zero-dose and under-vaccinated children."*

Impacts on technical and transferable skills: One of the key impacts reported was on the ability to **plan or organize immunization activities**.

"I have been able to do mapping of zero dose communities and planning for primary health care integrated service delivery."

Networking benefits: One of the key features of the approach taken is to connect individuals across hierarchical and geographic divides. There are several routes through which this can benefit individuals' personal and professional development.

One of the most commonly reported impacts was the **identification of a specific new idea or strategy that could be applied locally** and therefore affect how they performed their job.

*"As a health professional my participation **changed the way I work to reach zero dose children** by putting more access on the initiative to raise awareness and collaborate with parents who are directly responsible for children and especially*

their data. vaccines while they are still in the maternity ward to avoid loss to follow-up.”

A further benefit is that participation helps to build “**social capital**”, by **expanding individuals’ networks of contacts** and thereby providing an additional source of knowledge that could be accessed in the future.

*“This participation allowed me to **build new relationships with different colleagues** through the exchange of experiences.”*

Peer engagement also enabled practitioners to **gain access to additional immunization contexts**, to appreciate similarities across settings, and to **build “social solidarity”** with peers facing similar challenges.

*“It allowed me first of all to understand that my challenges in terms of vaccination are similar to those of colleagues around the world and therefore, **that I am not alone in this fight**, because we will meet very often to share the proven practices so that others can benefit from them. **This gave me even more desire and courage to continue fighting for this noble cause.**”*

Personal growth and development: Participation in peer learning also has **indirect, generic benefits** for individuals. These would be expected to have long-term benefits in terms of the performance of individuals and the capacities of immunization programmes.

Perhaps unexpectedly, one cited impact is on **confidence levels**: several participants reported feeling more confident in the workplace following participation in the learning event.

*“My ideas and knowledge on the topic are clearer **and I can approach this question with more confidence.**”*

Commonly, respondents noted significant impacts on **commitment and motivation**, for example because of access to new ideas and practices, or because they are inspired by the achievements and commitment of their peers.

*“It’s the enthusiasm from colleagues across different countries and geographies. It is interesting to see that people commit their time, energy and resources to drive zero dose work. **This has made me take this zero-dose work a notch higher.**”*

Additional impacts are seen on the way that practitioners **approach their jobs**. In particular, some respondents reported impacts that reflect a **greater willingness to embrace innovation** and adopt more innovative practices (previous TGLF research has highlighted the importance of **organizational learning culture** to ensure this can happen).

“It is not just professional skills that are needed for effective work but creativity.”

*"I found the approach used in Uganda by targeting women who come for ANC quite interesting. The approach is very innovative and I think will go a long way in reaching zero-dose. I intend to introduce this approach to health facilities I work with during my engagement with them. **This unique approach had stirred me to think out of the box in addressing the zero-dose issue.**"*

More generally, participants' responses are indicative of the application of **more reflective practice**, based on exposure to new experiences and perspectives, including unfamiliar international contexts.

*"It has opened my eyes to see and **learn beyond what I was taught in school.**"*

*"This was a community of practice that enabled me to **think critically about the "how"** for reduction in the number of zero-dose children. I will replicate these learnings in my area of operation as we support local civil society organizations and VHTs to look out for the zero dose children so that they receive the life-saving vaccines."*

Other responses speak to improvements in transferable skills through participation, particular **interpersonal and professional communication**.

"I learned how to interact with people professionally, also participation teaches me interprofessional collaboration."

Finally, some of the most detailed feedback illustrates that **multiple benefits** can accrue to individuals participating in peer learning events.

*"Participating in the Gavi Zero-Dose Learning Hub's inter-country peer learning exchange has **profoundly influenced me as a healthcare professional**. Here are five significant ways in which this experience has brought about change:*

Global Perspective: *Engaging with practitioners from diverse countries **broadened my understanding of immunization challenges worldwide**. It exposed me to a range of strategies and solutions that I hadn't previously considered. This global perspective has **enriched my professional outlook, encouraging me to think beyond local contexts**.*

Innovative Approaches: *Learning about innovative practices in immunization, such as ANC data utilization and community-centred microplanning, **inspired me to explore creative solutions in my own work**. I now approach challenges with a more innovative mindset, seeking unique ways to enhance vaccination coverage and reach zero-dose children.*

Data-Driven Decision-Making: *The emphasis on data analysis and microplanning highlighted the crucial role of evidence-based decision-making.*

I've become more committed to using data to identify gaps and tailor interventions effectively. This shift towards data-driven strategies has enhanced the precision and impact of my professional practice.

***Community-Centred Care:** Witnessing the success of community engagement strategies underscored the importance of involving local communities in healthcare initiatives. **This has fundamentally changed how I approach patient care**, placing a greater emphasis on involving and empowering communities in decision-making and health promotion.*

***Reinvigorated Commitment:** Interacting with dedicated professionals and learning from their successes has **reignited my passion for healthcare**. I'm now more motivated and committed to making a positive impact on immunization services. **This renewed sense of purpose** drives me to continually seek improvements and strive for excellence in my role.*

*In summary, participating in this peer learning exchange has **transformed my professional perspective**, instilling in me a more global, innovative, data-driven, community-centred, and motivated approach to healthcare and immunization efforts."*

GENERAL FEEDBACK – IMPLICATIONS FOR PERSONAL AND PROFESSIONAL DEVELOPMENT

Many responses to the question about the learning taken away from ZDLH-X2 also speak to impacts on personal and professional development.

These include responses highlighting the advantages of **hearing from international peers facing related challenges**, which was seen to be highly **motivating**.

*"I have found out that **immunization professionals are facing similar challenges globally** and have developed methods/ strategies that are effective and efficient. **The sharing of such experiences and support from peers and Partners are motivating and a great boost to my commitment.**"*

Respondents also reported being **motivated and inspired** by the efforts being taken by their peers and their dedication.

*"During this event I learned of how my peers in other countries are **taking courageous steps to reach very difficult settings**. This has motivated me to keep doing what I do and to use some of the approaches to apply at my own work."*

Motivation was also strengthened through greater recognition of the **scale of the zero-dose challenge**.

*"**My motivation and commitment drastically changed positively** towards helping the zero dose children because I feel like they need us, and **if we relent, we are risking the lives of many children around us**. So, I feel more strengthened to reach out to these children around my community after the live event."*

In addition, an awareness of a **wider range of tools and strategies** to reach zero-dose children provided a fillip to many practitioners.

*"This event has instilled in me a **renewed commitment to my work in healthcare**. I now understand the critical role of community involvement, microplanning, and data-driven decision-making in improving vaccination coverage."*

*"Discovering **new ways to reach** the zero doses and under immunized children in our communities was **highly motivating and intellectually stimulating**."*

*"Approaches used at health facilities to identify & follow up on zero-dose/under-immunized children & missed communities. I never thought such thoughtful innovations could work. I have been thinking about a ground-breaking research before achieving this. **But with these experiences, I will be applying and tailoring such approaches to the context of my work place**."*

As well as these practical impacts, the experience of participation encouraged a number of respondents to adopt **more reflective practice**.

*"The exchange helped me think differently about my work by **highlighting the need for a more holistic approach**. I learned that addressing zero-dose children requires understanding and addressing the underlying barriers they face, such as limited access to healthcare, cultural beliefs, and socio-economic challenges. **It made me realize that my role extends beyond simply providing vaccinations but also involves community engagement, collaboration with different sectors, and data-driven decision-making**."*

*"I used to think that health care is only about treatment and vaccinations but with the recent zero dose peer learning, **I see health care a complex structure consisting of different components** ranging from leadership and governance, service delivery, healthcare financing, logistics and supply chain and data."*

Indeed, some respondents noted a **fundamental shift in their mindset**.

*"Through this involvement, I learned that achieving our goals becomes more attainable when we work closely with Community Outreach for Service Integration. **It has fundamentally changed my perspective on my work**, particularly in terms of Community Outreach for Service Integration. It has boosted my motivation and commitment, knowing that we can achieve meaningful results through collaborative efforts.*

*Moreover, **my thinking about healthcare has evolved**. I now place a greater emphasis on community involvement and integration, understanding that it's not just about providing healthcare services but integrating them effectively into the community to ensure better outcomes."*

*“As a contributor selected based on my submission of a zero-dose microplan, I gained valuable insights that have reshaped my perspective on immunization and healthcare. **This event reinvigorated my motivation and commitment to immunization efforts.** It reinforced the idea that every child’s health matters and it’s our collective responsibility to ensure they receive life-saving vaccines. I now view healthcare as a collaborative endeavour, where community participation and data-driven microplanning are paramount.”*

8. KNOWLEDGE TRANSLATION: HOW PARTICIPATION IS DRIVING CHANGES IN PRACTICE

The peer learning approach is designed to address some of the drawbacks of conventional approaches to dissemination. In particular, it aims to facilitate knowledge translation – utilizing knowledge to drive action, results and measurable change.

Given the timescale between the ZDLH-X2 event and drafting of this report, it is not possible to track implementation, but information collected in the post-event questionnaire provides an indication of initial steps taken to translate knowledge and provides evidence of intention to implement.

Feedback in the post-event questionnaire highlighted situations where participants had taken away specific ideas, particularly relating to the “identify” and “reach” components of the IRMMA framework, that they had adopted locally or planned to introduce, highlighting the potential for **knowledge translation**.

Key take-aways include:

- Multiple respondents expressed an **intention to implement** activities and strategies discussed at ZDLH-X2.
- Several case studies were identified as **practical and potentially applicable local solutions**.
- Longer-term follow-up of participants could explore the **extent to which intentions were acted upon and local impacts**.

The description of using **registration for antenatal care** to capture information about expected due dates for pregnant women, allowing follow up in the community, was frequently cited as an approach that participants planned to introduce.

“It was awesome to realize that one could actually track ZD children through the ANC [antenatal care] register, using the calculated EDD [expected due date]. I think we will implement that as soon as possible in our state along with all other beneficial approaches learnt.”

“I found the approach used in Uganda by targeting women who come for ANC quite interesting. The approach is very innovative and I think will go a long way in reaching zero-dose. I intend to introduce this approach to health facilities I work with during my engagement with them. This unique approach had stirred me to think out of the box in addressing the zero-dose issue.”

More generally, engaging with **traditional birth attendants** (TBA) was seen as an important way to reach pregnant women giving birth in the community, who are not directly linked to health facilities.

*“One of the most important things I learned was from the story shared by one lady from Kampala on how they were able to reach zero-dose children in the community by engaging community organizations and traditional birth attendants to identify families that recently gave birth at home. I believe utilizing traditional birth attendants in rural communities is an effective way of reaching zero-dose children and serve as a mechanism to enhance awareness on the benefit of vaccine to children, therefore **henceforth we will start engaging TBAs to see how we can come up with a framework to accommodate them in our community engagement strategies.**”*

Several respondents suggested that they planned to **involve community representatives more in microplanning** following participation in ZDLH-X2.

*“I will now do differently in my work by doing microplanning with the **community stakeholders and influential persons** to enable me identify thematic areas for effective immunization service delivery to achieve the desire results.”*

Taking advantage of **community festivals**, or other events at which communities gather, was another strategy felt to be of wide applicability.

*“I learnt that with proper data collection and analysis we can identify zero-dose children and with good community engagement and risk communication involving key leaders and targeting large public gatherings we can reach more zero dose children. **These are lessons that I will apply in my work.**”*

Respondents also reported picking up on **community engagement with community leaders**, including religious leaders, and incorporating communities into microplanning.

*“I learnt how community leaders were implicated in the activities to reach zero-dose and under-immunized children. **So I have also started implementing that in my area of work.** I have also started talking to religious leaders and training CHWs to go to churches, schools and other social gatherings and talk to them concerning vaccination, and identify zero-dose and under-vaccinated children to vaccinate.”*

*“What I will do differently is to support my health workers to do extensive social mobilization and **involve the community leadership in our immunization planning** activities to minimize zero-dose children.”*

In some cases, exposure to innovative new practices encouraged participants **to think more creatively** about activities they could undertake locally.

*“One of the participants from Northern Nigeria spoke on how they use motor bike and gather the physically challenged people to a location and arrange for them to be vaccinated there. This drew my attention to this group of people who because of their limitations may form a greater percentage of the under immunized population. **I immediately began to think of my own strategies to use and reach out to them,** starting with immunization advocacy.”*

“I feel motivated after hearing from Fanny Ogwu on using naming ceremony event to address zero dose. I then feel I need to be more committed to zero dose tracing. The different thought I have about facility is to extend our services to other area by mounting fixed post in some strategic areas like Departures, eg airport especially during Hajj operation to Saudi Arabia where families see their relative off.”

The discussions around **avoiding missed opportunities for vaccination** led many respondents to identify possible approaches to **integration** that they could apply locally.

*“I learned that it is possible to **integrate immunization programmes into routine activities such as OPD [outpatient department] visits** in order to identify zero-dose and under-immunized children and offer the service to them. I worked in an urban area with 3 hospitals and **I think this is something we can implement in our district.** We are going to plan with the hospitals and health centres and offer training for this to happen.”*

*“After the session, I noted that **we can institute strategies to limit missed opportunities for vaccination by checking children’s vaccination status every time they come in contact with the health facilities** or outreaches regardless of the reason for the visit and offer them appropriate vaccines. Also, we should eliminate false contraindications for vaccination through capacity building of all staff providing Primary health care services.”*

Several respondents reported **introducing several innovations** on the basis of experiences discussed at the ZDLH-X2.

*“In response to the new strategies learnt from the Gavi Zero-Dose Learning Hub, **we are adapting the practices on top of the existing ones in our district.** One of them is tracking mothers at ANC. Also the missed opportunity and service integration strategy, screening eligible children at OPD and immunizing them immediately.”*

*“It was interesting to glean insights about the use of microplanning to identify communities with the highest burden of ZDC and to deploy innovative strategies such as MOT to line list these children, reach them with vaccination and also ensure referrals and follow up vaccinations. **This integrated PHC approach which***

is anchored on an evidence-based framework is a strategy I intend to adapt and deploy in my work.”

Furthermore, a number of participants fed back that they would be **sharing back what they had learned at the event with their colleagues**, multiplying its impact.

*“What I will do differently is to **meet with relevant stakeholders at the sub-national level to review the lessons shared in the ZDLH session**, adopt a few strategies, and implement them in identifying, tracking and vaccinating zero-dose children across our communities.”*

*“I learned about the innovative way that Scovia Okello applied Integration in her country, Uganda. By using ANC data to follow up on births and vaccination and so are able to pick mothers who did not return to deliver or immunize their babies. This is integration. **Although I emphasize integration to my team and follow it up** but this shared experience has inspired me to discover other opportunities for integration (community outreaches) and to intensify the areas we have been integrating.”*

*“First I learned the application of microplanning properly and how it will guide me to reach out to zero-dose children and communities. **I also arrange a brief meeting with the other community volunteers who do not have access to internet so I can play the recordings and also explain to them what I learn.**”*

*“The **community volunteers I train will get a step down workshop on what I learn from the event.**”*

Although the post-event survey was completed soon after the event, several respondents reported that **participation had led to changes in practice that improved performance.**

*“I am the coordinator of Community-Based Surveillance and response initiative (CBSRI) at WHO country office in Guinea Bissau; during our field activities in different communities we have reached many children with zero-dose and **from this experience learned during this meeting, we have improved the quality of our intervention.**”*

Longer-term follow up of participants could reveal more about the nature of impacts on practice and performance.

Some of the more detailed feedback illustrated the potentially profound impact that participation can have:

“The insights from community-level strategies, particularly in Kotido district, Uganda, and through “Project Radiance” in Kwara LGA, Sokoto, Nigeria, have been illuminating and interesting. Hearing the practical application of ANC data for

monitoring ZD children and the innovative restructuring of microplanning has significantly altered my perspective on healthcare interventions.

One major shift in my thinking involves the critical need for a robust monitoring and evaluation framework. This would enable immunization experts and managers to precisely measure the impact of interventions, a crucial step towards ensuring their efficacy and adaptability.

Furthermore, the highlighted importance of involving volunteers and traditional leaders has been a pivotal learning point. Their roles in Primary Health Care (PHC) extend well beyond immunization, making their continuous engagement paramount for achieving holistic community health. This realization reinforces my commitment to integrating such community figures into healthcare initiatives, fostering a more inclusive and effective approach to community health.

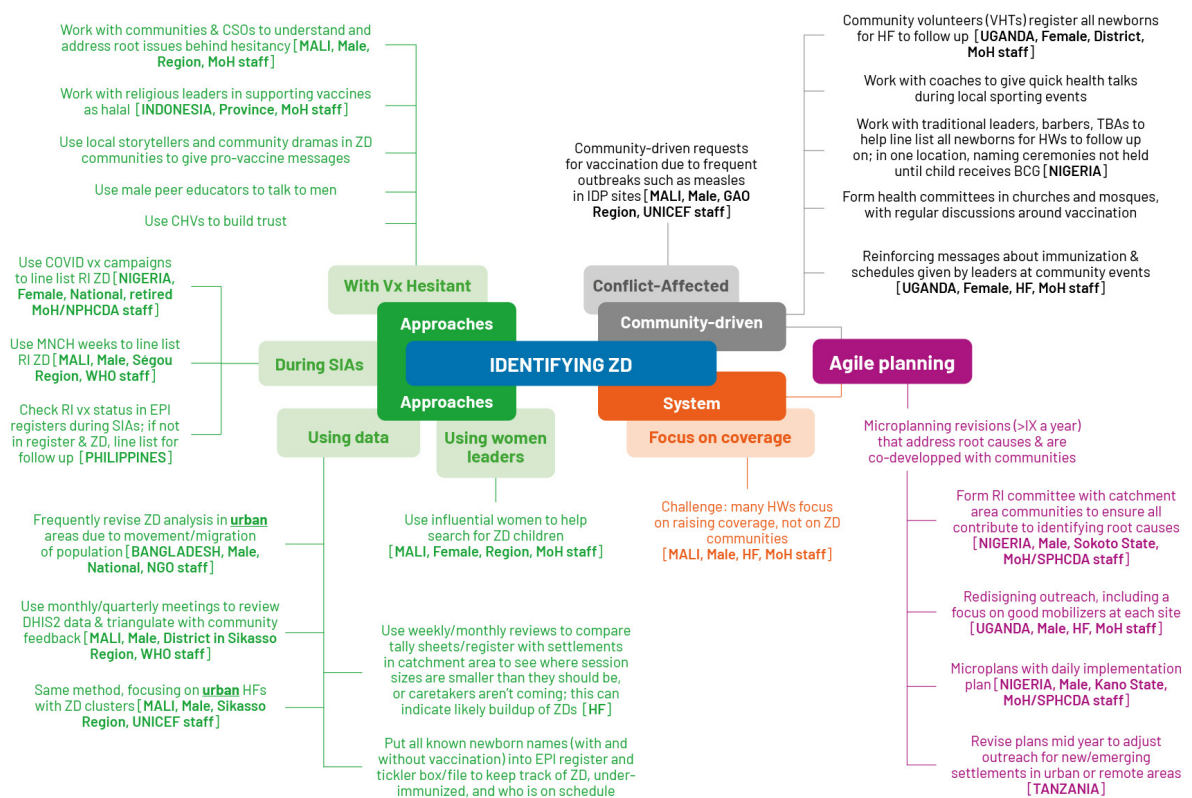
Lastly is that I now have a deeper appreciation for pre-emptive resource mobilization and allocation to circumvent the often-highlighted challenge of resource constraints, ensuring seamless implementation of interventions. It was a recurring theme across many interventions especially when it comes to scaling.

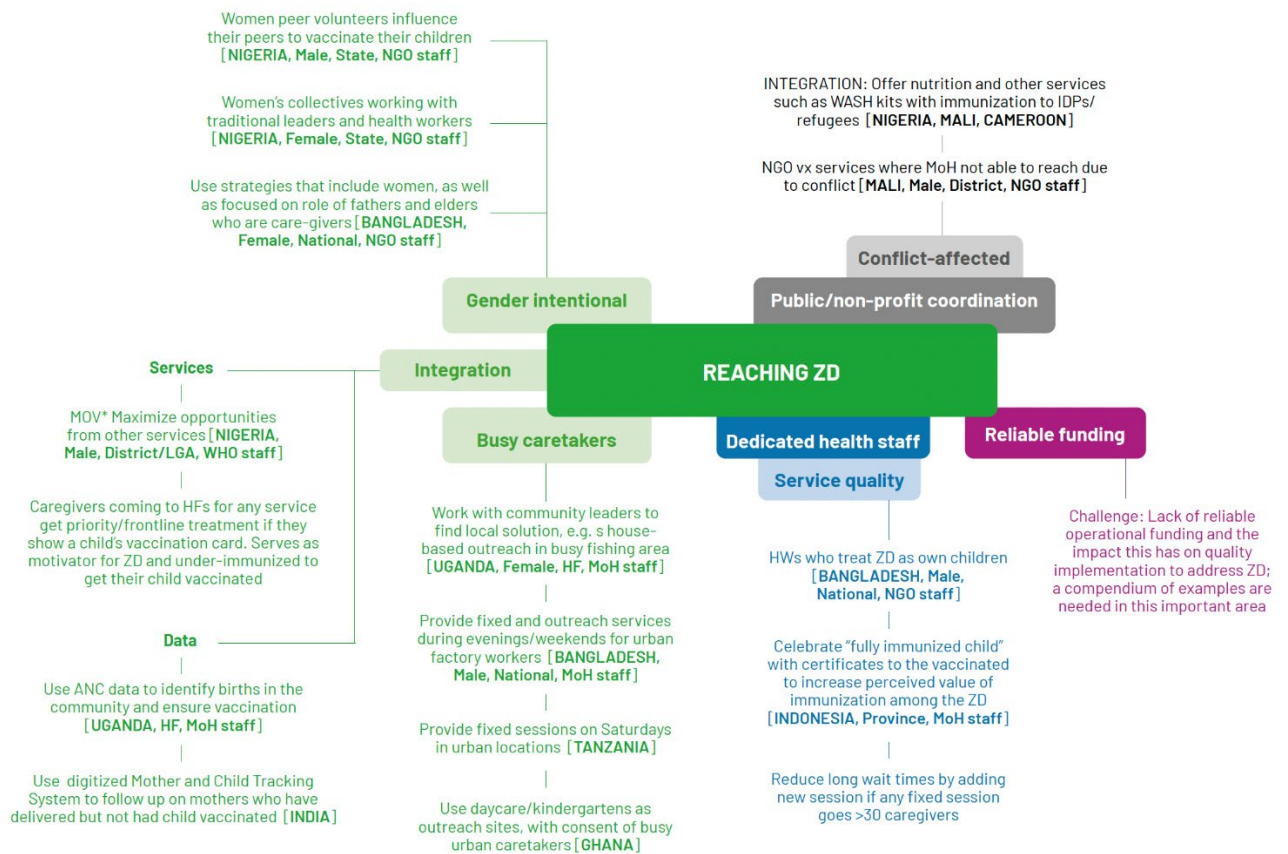
In reflection, these learnings will inform my approach to developing and implementing healthcare strategies, placing a greater emphasis on comprehensive planning, community involvement, and adaptive monitoring frameworks.”

9. CONCEPTUAL FRAMEWORK

The experiences shared through the post-evaluation questionnaire provided additional insights into IRMMA’s “identify” and “reach” categories. An initial attempt has been made to develop a **conceptual framework** from the in-depth case studies to capture and organize these experiences.

The following represents insights from ZDLH-X1 and ZDLH-X2 participants, with examples drawn predominantly but not exclusively from CLH countries. This conceptual framework can be expanded over time to include further insights around IRMMA’s “identify” and “reach” categories, and a similar approach could be taken with the other categories of “measure”, “monitor”, and “advocate”.





* MOV: missed opportunities in vaccination

NEXT STEPS:

- **ZDLH to continue building out examples around each of IRMMA's categories, drawing on ongoing events and data collection, so that the conceptual framework remains a living document that provides a visual mapping of practitioner solutions (or key challenges) in addressing zero-dose issues.**

10. CONCLUSIONS

ZDLH-X2 has generated a wealth of information on zero-dose challenges, practices, and needs, particularly in focus countries, Nigeria and Uganda. It has also provided insights into how peer learning can be leveraged to support knowledge translation and diffusion of practice through digitally connected networks.

IDENTIFYING AND REACHING ZERO-DOSE CHILDREN

The information and experiences shared by participants has provided insights into the practices being adopted to identify and reach zero-dose and under-immunized children and missed communities. In particular, the contributions have shone a light on **microplanning practices** and how **integration of immunization with other health services** is being used to identify opportunities for catch-up vaccination.

Notably, practitioners believe that **working with communities** will be critical to solving zero-dose challenges. Of the most promising practices identified by respondents, the top four, accounting for more than 60% of responses, all focus on community-related activities. In part, this may reflect a stronger focus on communities among sub-national practitioners.

Of particular note are the reported efforts to **engage communities in microplanning**, reflecting the widespread belief that working in close collaboration with communities will be central to solving zero-dose challenges. It was clear from many contributions that reducing the numbers of zero-dose children requires a detailed understanding of communities, down to the level of individual households, and this can only feasibly be achieved through partnerships with local communities, and with communities themselves playing a critical role in supporting immunization programme activities.

Several other contributions have explored how immunization can be integrated within other health systems, as part of strategies to reduce the numbers of **missed opportunities for vaccination**. While the general principle of reducing missed opportunities for vaccination is well-established, there are countless ways in which it can be applied in practice, depending on local contexts and how services are organized.

Hence, there is considerable scope for innovation in practice, and for practitioners to learn from the experiences of their peers and the practices that they have found to be successful, as well as from global guidance.

Some **limitations** must be acknowledged. Rarely have formal evaluations been carried out of the practices described, and it has not been feasible to investigate impacts beyond those reported by participants. In addition, data relate mainly to a group of self-selected

subnational-level practitioners, which cannot be considered representative of all immunization programme staff.

Nevertheless, the general concepts on which practices are based (such as community engagement and missed opportunities for vaccination) are well-established and founded on a strong evidence base. The value of these activities is in **facilitating their adaptation and implementation according to local contexts**. It is unrealistic to imagine that strong research evidence could be generated for every variation of implementation context. Even so, there is scope to consider how to encourage and capacitate practitioners to build in simple evaluation and learning cycles into the implementation activities (which forms a key element of TGLF's project-based peer learning programmes).

LEVERAGING PEER LEARNING

The ZDLH-X2 mini-programme of activities has demonstrated the **power of peer learning to connect practitioners and foster the exchange of knowledge in ways that encourage implementation of new ideas and under-utilized "old-but-good" ideas**. The feedback from participants suggests that this approach is not only appealing to a wide range of health professionals but also leads to multiple impacts on knowledge, skills, motivation, re-commitment, and wider professional development.

These types of initiatives can therefore not only facilitate the **translation of knowledge into practice** but also **build human capital**, with the potential to deliver long-term benefits to immunization programme performance.

Following the two ZDLH-X peer exchange events, there are now opportunities to build on the experiences shared and to maintain peer connectedness and further facilitate implementation, through the work of Country Learning Hubs.

In particular, this approach provides an opportunity to **situate the IRMMA framework within the context of day-to-day planning and implementation**, helping to integrate it within everyday activities.

The findings from ZDLH-X1 and -X2 highlight the advantages that peer learning has over conventional approaches to dissemination, which face multiple barriers to effective implementation. Facilitating peer networks can be a highly cost-effective way of overcoming these barriers, **leveraging the strong intrinsic motivation of practitioners to share experience and support the work of their peers**.

ANNEX 1: FREQUENTLY ASKED QUESTIONS... AND SOME ANSWERS (UPDATED)

This FAQ was first developed to provide answers to generic and case study-specific questions raised at the ZDLH-X1 peer learning session between Bangladesh and Mali. It has now been updated to include questions raised at the ZDLH-X2 event between Nigeria and Uganda, with specific questions focusing on case studies in Annex 2. Participants had the opportunity to post questions during the event itself or when watching a recording. Answers were provided by immunization specialists familiar with LMIC settings and, when appropriate, by the individuals who contributed during the experience-sharing event.

This generative process, in which answers are provided in response to specific knowledge needs and questions, is an example of working towards knowledge translation (i.e. turning learning into action). It illustrates the beginning of a “learning loop” in which learning can be connected to practitioner needs as they consider what they need to know in order to take action.

To continue down a pathway leading to action, it is recommended that relevant MoH EPI teams, Country Learning Hubs and in-country partners use this FAQ and the case studies as part of ongoing follow up and technical assistance to sub-national immunization practitioners.

GENERAL QUESTIONS

1. Can you clarify the definitions and the differences between zero-dose children (ZDC), zero-dose pregnant women (ZDPW), under-immunized children, insufficiently vaccinated children, and zero-dose communities?

The most direct and simple answer, and according to Gavi’s operational definition, is that ZDC are **children who have not received a single dose of diphtheria-, tetanus- and pertussis-containing vaccine (DTP)**, such as Penta1. However, for most purposes, ZD children are those who have never been immunized. “ZDPW Td1” pregnant women are those who have not received a dose of Td (tetanus–diphtheria) vaccine; both pregnant women and their to-be-born infant are therefore at risk of getting tetanus.

“Under-immunized” or “under-vaccinated” children were traditionally called “defaulters”. These are **children who started but did not complete the number of doses required for each antigen according to the national immunization schedule**. But they have received at minimum the first dose of Penta vaccine (Penta1). They may have missed out on any of the required subsequent doses (i.e. Penta 2, Penta 3) or measles- and rubella-containing vaccine dose 1 (MR1) or dose 2 (MR2), or oral poliovirus vaccine/inactivated poliovirus vaccine (OPV/IPV) doses. Under-vaccinated

children may sometimes be a far bigger issue than ZDC (in terms of absolute numbers), and lead to a higher risk of outbreaks such as measles.

The term “**zero-dose communities**” refers to urban or rural communities where ZDC or ZDPW tend to cluster or accumulate for various reasons. It is important to understand these reasons, so efforts can be prioritized and specific priority areas defined for corrective measures. Such communities could be hard to reach or never reached due to health system constraints (e.g. lack of human resources, logistics, difficult terrain, limited funding), isolation due to insecurity, or being part of nomadic communities. Such communities may also be affected by vaccine hesitancy or refusal for various reasons that need to be investigated.

It is important to assess if ZD communities and caregivers of ZDC face **accessibility or utilization issues**, or both. Care should also be taken not to label a whole community as ZD unless they truly are, as this label can lead to generalizing the issues in that community. The term “community” suggests that the group is organized around certain commonalities (e.g. geographic location or sociocultural connections). In some cases, ZDC are marginalized because they are outside of a group (e.g. newly arrived urban poor who may be living on the streets or in construction zones, as opposed to urban poor who have settled in slum dwellings).

2. How do the number of ZDC contribute to low-dose routine immunization in the context of limited resources? Would it be possible to learn more about your experience and the methods you used to assess the situation?

The “absolute number” of ZDC Penta1 will not tell you how high or how low your Penta1 coverage is, as this depends upon the total number of targeted children in the area served by an immunization post, health centre, subcentre, or in a district, region or country.

If your Penta1 coverage is high (over 90% or 95%), then data should be triangulated (data from different sources compared to check for similarities/differences) to find any pockets of ZD and under-immunized children. These children may belong to groups who have migrated from rural areas and may also likely miss out on other services such as malaria prevention or nutrition, and integrated services or linkages to PHC may be needed. Even with high overall coverage, pockets of ZDC and/or under-immunized children can lead to outbreaks of vaccine-preventable diseases.

In some areas, high Penta1 coverage may be associated with a low Penta3 or measles vaccine coverage due to a major drop out between Penta1 and Penta3 or measles vaccination (over the 10% that WHO recommends as a threshold of acceptability). The absolute number of drop-outs in an area may be far higher than the number of ZDC, representing a bigger problem and a higher risk of outbreaks of vaccine-preventable disease such as measles or diphtheria. The number of drop-outs may become a priority if the dropout rate exceeds 5–8%.

The maximum Penta3 coverage possible is Penta1 coverage with zero drop-outs. But Penta1 coverage can be low due to lack of access to immunization of certain communities or groups, automatically affecting Penta3 coverage. There are several steps you can take here:

- Review administrative data at different levels in urban and rural areas.
- Review the results of coverage surveys (whenever they occur), even if they are usually conducted only at national and subnational levels, to compare with administrative data (and especially if the coverage surveys have a high number of documented doses rather than recall/history).
- Map accessibility to immunization sites (fixed/static, outreach, mobile) in urban and rural areas and look at the distance between communities and immunization sites.
- Review operational indicators of a functional immunization system such as stock-out of vaccines, percentage of immunization sessions by fixed/static, outreach and mobile vs planned sessions.
- Map hard-to-reach or never-reached communities that are served only during supplementary immunization activities (SIAs) and not routine immunization.
- Confirm the results on localization of ZDC or drop-outs, using a LQAS approach (lot quality assurance sampling; see [Review of Lot Quality Assurance Sampling Methodology and its Application in Public Health - PMC \(nih.gov\)](#)), especially in urban areas.
- Conduct key informant interviews to localize ZDC and understand causes. These could be with:
 - Policymakers (health and non-health, especially those linked to local budgetary decision-making).
 - Health workers dedicated to immunization services at national and sub-national levels.
 - Programme managers.
 - Caregivers of ZDC and ZDPW.
 - Community leaders (males and females).

This assessment will help to find out the localization of ZDC and under-immunized children in hard-to-reach areas and urban slums, and shed light on contributory factors.

The sharing of tools, methods, and results between countries at each level will be very useful for practitioners.

3. What are some upcoming funding opportunities for CSOs to sustainably support the efforts to reduce the number of zero-dose children (ZDC) and zero-dose pregnant women (ZDPW)?

CSOs are very country- and community-specific. In supporting their role and efforts towards improving routine immunization coverage, SIA coverage and catch-up campaigns, resources have been made available by Gavi in its support of country multi-year plans and yearly plans (e.g. full portfolio planning, health system and

immunization strengthening), catch-up campaign resources, equity accelerator funding (EAF), and COVID-19 vaccine operational resources. HSS (health system strengthening) grants are now required to dedicate at least 10 percent of their budgets to CSOs – although the number of local NGOs is still low. In-country donors and international NGOs may also have resources to support ZD-specific efforts (for example, see Gavi’s ZD Immunization Project (ZIP) <https://www.gavi.org/vaccineswork/zip-new-way-get-vaccines-zero-dose-children-some-worlds-toughest-regions>).

QUESTIONS RELATED TO CONFLICT-AFFECTED POPULATIONS

4. How can you overcome socio-cultural barriers in areas of conflict or humanitarian crisis?

Socio-cultural barriers in conflict areas need to be understood and addressed through a dialogue and consensus with local leaders on how to successfully deliver vaccines to the targeted populations.

A common barrier in some countries is the gender of vaccinators. Male vaccinators may not be authorized to vaccinate women outdoors or sometimes indoors. And in some areas, there are insufficient female workers able to inject vaccines. Some countries have been able to mobilize female vaccinators in neighbouring districts or in nursing schools. Others have decided to spread over time the execution of outreach and mobile activities.

Some in conflict areas have managed to arrange a truce to allow access; others have recruited personnel (sometimes skilled vaccinators) from the opposition groups with roles and responsibilities to ensure smooth and safe operations.

5. How do you track zero-dose children in highly migratory populations, particularly in urban or peri-urban slum-like areas?

Tracking and vaccinating migratory populations may require sustained efforts and resources. It is essential to prioritize equity and access to healthcare for all, including those who are highly mobile.

Some strategies that can be employed to identify and reach all children, including the zero-dose and under-immunized within these populations, relate to:

- **Mapping and understanding migration patterns:**
 - Use data and local knowledge to map out the migration patterns of these populations to predict where they will be at different times of the year.
 - Engage with community leaders to gain insights into the movements and needs of migratory populations.
 - Collaborate with sectors that regularly interact with migratory populations, such as agriculture, construction, and transportation.
 - Use these collaborations to gather information about migratory patterns and to disseminate information about upcoming vaccination clinics.

- Create a system to document their movements, such as travel history or temporary residence addresses.
- **Robust data collection and monitoring:**
 - Implement systems to track the vaccination status of individuals within migratory populations, considering their mobility.
 - Use this data to identify gaps in coverage and to plan targeted interventions.
 - Track and register all pregnant women using a unique country-wide code and track the vaccination status of the newborn until they are 5 years old. This will also ensure that all pregnant women receive their required vaccination doses. Post-natal visits can also be useful and can be done by health worker or civil administrators responsible for registering births.
 - Establish a system for sharing vaccination records across regions or countries to ensure continuity of care, especially for those who move frequently.
- **Community engagement:**
 - Engage with community leaders and organizations within migratory populations to gain their trust and support in the vaccination efforts through advocacy meetings.
 - Train and employ community health workers who come from the migratory populations themselves selected with help from community leaders, as they can more effectively communicate and build trust within these communities.
 - Use these community health workers to conduct outreach, share information about the importance of vaccination, and assist in organizing vaccination sessions.
 - Invest time in building trust with migratory communities, understanding their concerns, and addressing any misconceptions about vaccination.
 - Involve community leaders and influencers in vaccination efforts.
 - Develop communication materials and strategies that are culturally sensitive and tailored to the languages and preferences of migratory populations.
 - Engage in social mobilization efforts to raise awareness about the importance of vaccination and address vaccine hesitancy.
- **Mobile vaccination clinics:**
 - Deploy mobile vaccination units that can travel to locations where migratory populations are temporarily residing.
 - Ensure that these mobile units or clinics, if available, are equipped with cold chain facilities to ensure vaccine efficacy.
 - Implement sustained catch-up vaccination schedules and allow for flexibility in vaccine administration timings to accommodate the transient nature of migratory populations.
 - Consider offering multiple vaccines during a single visit to maximize coverage.
- **Integration of surveillance and zero-dose activity:** During surveillance activities healthcare workers can come in contact with children with diarrhoea, meningitis, or

other infections. They can use this opportunity to ask for the child immunization records and check immunization status. Zero-dose children can be line-listed and linked with routine immunization services for catch-up vaccination as well with communities for follow up.

Additional reading:

Reaching ZDC in India: <https://www.unicef.org/stories/sowc-2023/india-reaching-zero-dose-children>

Reaching ZDC in Urban slums in Nigeria: <https://www.unicef.org/stories/sowc-2023/nigeria-vaccination-campaign-urban-slums>

Documents focusing on global and country-level findings around ZDC: [Resource Library | Zero-Dose Learning Hub \(gavi.org\)](#)

6. How do we restore and strengthen immunization to effectively reach populations in humanitarian settings?

To effectively reach populations in humanitarian settings and strengthen immunization programmes, a comprehensive and adaptive approach is required. These settings are characterized by armed conflict, insecurity, and mass displacement, and are highly susceptible to the spread of epidemics due to weakened health systems and disrupted vaccination programmes.

Gavi's ZIP programme is also advocating for understanding the experiences of people who have been displaced due to conflict/insecurity. A better understanding of how long their regular health care has been disrupted and the other experiences they may have faced will likely help inform programming in terms of planning for needed vaccines and to address other health/social service issues.

- **Strengthening supply chains:** Ensure the continuity of vaccination programmes by stabilizing supply chains, maintaining cold chain viability, and ensuring the availability of vaccines even in sporadic conditions.
- **Capacity building for health workers:** Train and equip health workers to safely and effectively deliver vaccines, even in insecure environments. This includes providing personal protective equipment (PPE) and training on infection prevention and control (IPC) measures.
- **Community engagement:** Build trust within communities through transparent communication, addressing misinformation, and actively engaging with the population to understand and meet their broader needs, not just focusing on immunization.
- **Adaptation to population movement:** Develop strategies to reach displaced populations, including those in internal displacement or refugee status, and adapting vaccination programmes to cater to the increased demand.
- **Infrastructure protection:** Protect healthcare facilities from attacks and damage, ensuring the preservation of medical records, cold-chain equipment, and the overall integrity of the health system.
- **Focusing on the most vulnerable:** Prioritize zero-dose children and underserved communities, ensuring that the most vulnerable are not left behind.

- **Integration of immunization with broader health issues:** Work to improve related health issues such as water, sanitation, and hygiene (WASH) services and food security, and address gender-related barriers to healthcare access.
- **Flexible and innovative service delivery:**
 - Utilize mobile clinics to reach populations in conflict-affected areas.
 - Tailor immunization programmes to the specific needs and circumstances of conflict-affected populations.
- **Leveraging technology and data:**
 - Implement digital health records to keep track of vaccinations, even when paper records are lost or destroyed.
 - Utilize data to make informed decisions about where and how to deliver immunization services most effectively.

For more details on how to strengthen and reach populations in humanitarian settings you can download this guideline from UNICEF:

<https://www.dropbox.com/scl/fi/wz2vwtehwno2l0mnl6qnaq/UNICEF-Immunization-in-emergencies-and-humanitarian-settings.pdf?rlkey=vrt0u415xgjax5qa20877xz4q&dl=1>

Advanced E-course on vaccination during humanitarian emergencies:

<https://agora.unicef.org/course/info.php?id=13019>

Global research agenda on health, migration, and displacement: strengthening research and translating research priorities in to policy and practice:

<https://www.who.int/publications/i/item/9789240082397>

ANNEX 2: NIGERIA AND UGANDA CASE STUDIES

Contributions suitable for case studies were first identified by reviewing pre-event zero-dose experiences shared by over 500 practitioners in an open process (anyone can contribute). They were selected on the basis of Gavi's priority learning questions and finalized through dialogue between their contributors and global experts.

2.1: NIGERIA

TOPIC 1: Integration - Maximizing opportunities to reach zero-dose children and missed communities

Integration strategies were a common theme in the ZDLH-X2 event. Global guidance on integration can be found [here](#).

A. HEALTH FACILITY-BASED INTEGRATION TO REDUCE MISSED OPPORTUNITIES FOR VACCINATION IN NIGERIA

Minimizing missed opportunities one of the key focus areas of the [IA2030 framework](#) strategic priority 4 on life course and integration. The aim is to implement proven approaches to reduce the number of missed opportunities by integrating immunization into other primary health care planning, health registers, and other record-keeping systems, and streamline use of all encounters with the health system to verify and provide missed vaccines and other essential health interventions.

Reducing missed opportunities for vaccination (MOV) is a strategy to increase immunization coverage simply by making better use of existing vaccination sites (e.g. at health centres, hospitals, outreach/mobile services). A MOV refers to any contact with health services by an individual (child or person of any age) who is eligible for vaccination (e.g. unvaccinated or partially vaccinated and free from any contraindications to vaccination) that does not result in the person receiving one or more of the vaccine doses for which he or she is eligible.

As part of interventions to reduce zero-dose and under-immunized children in Nigeria, a number of strategies have been put in place to reduce MOV, building on the [WHO MOV guidelines](#), as illustrated in the following case studies.

IN-DEPTH INTEGRATION CASE STUDY NI.1: MISSED OPPORTUNITY AND SERVICE INTEGRATION STRATEGY TO REACH ZERO-DOSE AND UNDER-IMMUNIZED CHILDREN IN LARGER HEALTH FACILITIES AND SECONDARY HOSPITALS AT THE DISTRICT/LGA LEVEL IN SOKOTO STATE*, NIGERIA

SUBMISSION BY ABUBAKAR MUHAMMAD AMALI (MALE)

Through the Missed Opportunity and Service Integration (MOSIT) strategy, being piloted in Sokoto State, caregivers are screened at arrival at PHC facilities to check their eligibility for other services, including immunization of their children. Most suited to large facilities offering a wide variety of services, this approach can be a way to identify zero-dose or under-immunized children and ensure they receive their missing vaccinations.

Nigeria has developed and deployed innovative strategies through the National Primary Health Care Development Agency (NPHCDA) since 2017 to achieve universal health coverage (UHC) through immunization and PHC systems strengthening with the aim of “leaving no child behind”. As a result of this, different strategies and interventions are being developed and piloted for better service delivery and improved coverage and performance.

The **Missed Opportunity and Service Integration (MOSIT) strategy** is one of these examples, and is being tested in Sokoto. Unimmunized or under-immunized children who visit PHC facilities with caregivers for various services, such as an out-patient department (e.g. OPD for malaria treatment), antenatal care (ANC), family planning, or nutrition (community-based management of acute malnutrition, CMAM) could receive vaccinations while in the facilities but often do not. The MOSIT strategy seeks to address these missed opportunities.

The essential question guiding this intervention is: How can these crucial encounters with the health system be leveraged to ensure comprehensive vaccination coverage? MOSIT, grounded in the MOV strategy by WHO, provides the answer.

IMPLEMENTATION STEPS

The MOSIT strategy is based on these three key activities:

- 1. Client profiling:** Front desk officers at a facility register clients and screen them to identify other services they may be eligible for.
- 2. Integration register:** Eligible clients are meticulously catalogued in the Service Integration Register, and given a referral slip that details the different services they can get, which might include immunization.
- 3. Health worker protocols:** Health workers diligently inquire about referral slips from clients, directing them to relevant service points. This meticulous orchestration minimizes missed immunization opportunities.

* ZDLH focus state.

IMPLEMENTATION CHALLENGES

- Insufficient human resources at the health facility level.
- Poor synergy among state programme officers.
- Sub-optimal conduct/quality of supportive supervision by LGA teams.
- Poor documentation at the health facility level and shortage of qualified personnel handling data.
- Limited PHC service integration at model facilities.
- Frequent commodity stock-out, including vaccines.
- Poor coordination of service integration by LGA ward managers and most of the facilities in their charge.
- Inability to scale up the MOSIT strategy to a large number of health facilities across the LGAs, because of limited resources.
- This strategy only works well in large secondary health facilities with a multidisciplinary workforce able to administer an array of PHC services alongside immunization. It would be a challenge to implement in smaller facilities with fewer staff.
- Some care-givers come with children who do not have documented immunization records during health facility visits (see below).

ANSWERS TO QUESTIONS FROM PEERS

How do you know it is a promising or successful intervention? What data do you use to gauge if MOSIT is working or not, and how frequently do you analyse your MOSIT data?

In our experience, service providers understand the concept of missed opportunities and the objective of the service delivery integration strategy. They can be trained to provide integrated services at their respective health facilities and how to collect data relating to missed opportunities and the service delivery integration strategy.

When the strategy is implemented effectively, all clients have clear access to services they are eligible for when they visit health facilities. We have seen adequate information sharing at health facilities between health workers and clients/care-givers.

Though a newly launched intervention still being piloted, the data so far generated and presented by the monitoring and evaluation (M&E) technical working group suggest it has contributed significantly to improving routine immunization performance.

Can you provide evidence of the impact of the missed opportunity service integration strategy in Sokoto?

This missed opportunity service integration strategy is currently at its final testing stage in Sokoto. We are looking to see how we can scale up the strategy to all the affected local government areas (LGAs, similar to districts). We have to reach zero-dose children in the 23 LGAs in Sokoto State. We have started with one metropolitan LGA where we have a lot of missed children due to many factors.

Evaluation of impact is currently ongoing. We have separate data tools that we give to the service providers where data is being collated on a monthly basis and we have evidence to show that it is having a positive impact - we have data showing an improvement in

routine immunization performance. As at August 2023, the last data we collected in one health facility, we were able to reach 161 zero-dose children through this integration strategy. We hope to scale the strategy up when we get support from various organizations.

How are you managing data tools and their distribution to health facilities?

For now, this is not really an issue because we have enough data tools that have been distributed to the health facilities. Usually, we supply them on a monthly basis. The facilities do not have to come to collect them. We have an M&E unit that is in charge of distribution of data tools, including immunization cards.

How do you handle registration of children for immunization, especially when a child's card is not present?

Usually, we register children by settlements. So, if the child is already enrolled in immunization, since we do our registration by settlements, even if the card is not there, we will be able to trace them from the routine immunization register. And if it is a zero-dose child, we immediately register the child to commence immunization. We also have volunteers who usually know the children from their settlements. So, tracing the child's record is not really a big issue because each health facility registers children by their settlement.

Does the MOSIT approach cover other services beyond routine immunization and are pregnant women also captured for the Td vaccine?

Yes, the MOSIT approach covers all PHC services, including malaria, CMAM and other services. ANC is already captured in the strategy, and this is where the tetanus vaccine is included for pregnant women. We also have records for other services in addition to routine immunization. We do collect data on other services that have been integrated.

How do you handle children who are not from your catchment area and need immunization?

Usually when we get children who are not from a local catchment area, we try to make sure they are immunized. We try to immunize them and counsel them. If they have come from far away, we explain the advantage of getting vaccinated in their local catchment area, and we also give them details about what services are available nearer to them and the specific location of a nearer health facility. We also highlight that it is easier for them to access services closer to their home, because there are multiple times their children will need to get vaccinated, and going to a nearer location will save them time and transportation costs.

Facilities communicate with each other, and we also organize monthly review meetings where we validate data from all the service providers in the LGA. During these meetings, routine immunization data are reconciled across health facilities as children vaccinated from other catchment areas are reassigned to the health facility covering their area. So, if there are any data for another health facility, we share information and we assign those records to the health facility concerned. We do this so that when the child arrives at the

health facility, their data have already been captured. Also, we usually hold reconciliation meetings where we take care of some of these challenges.

Do caretakers have to come to the same facility for immunizing their children? How do you track if the child was immunized elsewhere?

The child must be registered and the immunization card available if he/she ever received a dose of vaccine to facilitate the identification of missing vaccine doses, including the first dose of Penta. In Nigeria, you can get your vaccine at any health facility offering vaccinations. However, the child's card may be missing, and if that is the case, we have to interview the caretaker on doses received. Information on all doses administered in the district by all health facilities will be compiled.

In large urban areas it is difficult to reattribute doses administered through MOSIT to one health facility-served area, as caretakers often use different facilities for different services.

How do you overcome the issue of wastage with the MOSIT strategy, and health workers' reluctance to vaccinate out of standard days of vaccinations?

The wastage rate is mainly an issue for BCG, measles/rubella, and yellow fever vaccines, especially in small health facilities. That is why MOSIT is more appropriate for large health facilities, as it will increase the potential number of doses administered.

Health workers' reluctance to vaccinate out of the standard day (routine immunization schedule) or hours of vaccination is usually due to having limited staff or limited vaccine stocks. Having many health workers who can vaccinate is very important to the MOSIT strategy, and this is why we use this approach only in larger health facilities where (1) health workers are available during other PHC services to administer vaccines, and (2) any opened vial of vaccine is likely to be mostly if not fully used.

Are you vaccinating all under-five children who are zero-dose or under-immunized? Or do you have an age limit?

We immunize both zero-dose and under-immunized children to complete the immunization schedule. It is important to reduce the number of susceptible children when outbreaks of measles or diphtheria are occurring.

It will be interesting to review data on the contribution of MOSIT in under-2-year-olds and under-5-year-olds.

BRIEF INTEGRATION CASE STUDY NI.2: INTEGRATION USING MISSED OPPORTUNITIES IN VACCINATION IN LARGER HEALTH FACILITIES AND SECONDARY HOSPITALS AT THE LGA/DISTRICT LEVEL IN KANO STATE*, NIGERIA

SUBMISSION BY MAGAJI ADAMU (MALE)

Through missed opportunity tracking (MOT), implemented at hospitals in Kano State, caretakers visiting paediatric outpatient departments in hospitals are asked about their children's vaccination status, and are directed to immunization posts if their vaccination record is incomplete.

CHALLENGE BEING ADDRESSED

Identifying and vaccinating zero-dose and under-immunized children when they access other primary health care (PHC) services in health facilities.

RATIONALE FOR THE INTERVENTION

Reason for choosing missed opportunity tracking (MOT): Hospitals, especially in Kano, have a significant number of zero-dose children. Capturing these children during other health service visits can be an effective strategy to increase immunization rates. Large health facilities, especially paediatric outpatient departments (POPD), are central health hubs, making them ideal for reaching our target audience.

The MOT strategy, initiated by the Kano State Primary Health Care Management Board in all secondary health facilities in Kano State, was initially developed in 1999 but was halted because of lack of support. It was later relaunched in 2015 with support from volunteer community mobilizers (VCMs).

PROCEDURE

- During outpatient services, clinicians ask about a child's immunization status.
- Under-immunized children are directed to the immunization post at the outpatient department.
- The immunization post provides the required vaccines.
- A register at the temporary immunization post records vaccine details. The child's next visit date is communicated.

INDICATOR OF SUCCESS

Increased coverage of zero-dose and partially immunized clients in facilities where MOT is operational.

CHALLENGES WITH THE MOSIT AND MOT STRATEGIES

- Insufficient human resources in smaller health facilities.
- Difficulties in following up clients from hard-to-reach areas who do not return.

* ZDLH focus state.

B. OTHER INTEGRATION INTERVENTIONS TO REACH ZERO-DOSE AND UNDER-IMMUNIZED CHILDREN IN NIGERIA

BRIEF INTEGRATION CASE STUDY NI.3: FINDING AND VACCINATING ZERO-DOSE CHILDREN DURING AND AFTER MNCH WEEKS (MATERNAL, NEWBORN AND CHILD HEALTH WEEKS) IN NIGERIA

SUBMISSION BY DR NNEKA ONWU (FEMALE)

Integrating immunization into MNCH Week activities, supported by a tracking app, can provide a way to identify zero-dose children and ensure they receive missing vaccinations.

Nigeria has one of the highest numbers of zero-dose children globally. With the country conducting MNCH (maternal, newborn, and child health) Weeks biannually, these present a golden opportunity to reach such children. The goal is to leverage the established infrastructure of MNCH Weeks to identify and vaccinate zero-dose children (ZDC) and under-immunized children.

DESCRIPTION OF THE INTERVENTION

1. Preparation for MNCH Weeks:

- Mobilize the community using community structures, ensuring everyone is aware of the upcoming event.
- Organize planning meetings and develop strategies.
- Review the MNCH scorecard/risk assessment tools, which utilize facility data from DHIS and coverage reports to categorize and strategize.

2. Activities during MNCH Weeks:

- Simultaneously provide several services, including routine immunization (RI) and community-based management of acute malnutrition (CMAM).
- Encourage caretakers to come with their children's cards.
- Utilize community health workers (CHIPs) to identify zero-dose children based on household data and community health information system data.
- Strategically place the RI site next to the CMAM site to efficiently redirect children identified as ZD or under-immunized at the CMAM site to the RI site for vaccination.

3. Documentation:

- Vaccination data of children is recorded on their MNCH handbook and also on an Android app equipped with a QR code scanner.
- The app collects details about the child's nutrition, immunization, address, mother, and community information.

- The app sends reminders to the caretaker's phone and to the community health worker. It also enables community health workers to access a child's information even if they move to another location.

4. Post MNCH Week: Efforts are undertaken to track any missed vaccination opportunities.

LESSONS LEARNED

- **Advantages of Integration:** In areas with limited resources, integrating services has been shown to be beneficial. It capitalizes on the principle of "vaccination without borders", ensuring that every opportunity is utilized to administer necessary vaccine doses.
- **Technological innovation:** The introduction of the MCH handbook with a QR code and a corresponding Android app revolutionized data collection, collation, and tracking. This innovation not only streamlined processes but also linked community health workers to households and facilities. Moreover, the handbook, resembling an ATM card, became a status symbol, boosting its acceptance among mothers.
- **Cost-effectiveness:** Combining MNCH weeks with supplementary immunization activities (SIAs) can be a cost-effective strategy, but it requires a seamless collaboration and an integrated planning approach. The feasibility and effectiveness of this integration have been tested, and colleagues can provide more insights.

In summary, this initiative underscores the significance of integrating different health services. By combining routine immunizations with other vital health services, this intervention aims to ensure that every child receives the necessary vaccines, thereby optimizing the health outcomes of the community.

BRIEF INTEGRATION CASE STUDY NI.4: INTEGRATION IN CONFLICT-AFFECTED CONTEXT: PEER EDUCATION ON IMMUNIZATION WITH WOMEN ATTENDING ANC BY VOLUNTEERS IN MAIDUGURI LGA, BORNO STATE*, NIGERIA

SUBMISSION BY DR ADAMU UMAR HARUNA (MALE)

Community volunteers can help to raise awareness of immunization, for example at ANC classes or community events.

CHALLENGE BEING ADDRESSED

How to reduce the high numbers of unvaccinated/partially vaccinated children in conflict-affected populations.

In the conflict-affected context described, a community-based intervention has been adopted focusing on peer education on immunization for women attending ANC, primarily through volunteers. The intervention consists of:

- **Peer education approach:** Small groups of health workers and volunteers educate women attending ANC in PHC facilities.
- **Community engagement:** The female volunteers also use community events like naming ceremonies and weddings as platforms to pass on information and share experiences about vaccine-preventable diseases.
- **Collaboration:** The strategy is being implemented primarily at Muhammad Shuwa Memorial Hospital, a major hub where a significant number of women and children access health services.

IMPLEMENTATION CHALLENGES

Unfortunately, we did not get enough funding. However, we work on a volunteer basis as a social responsibility to give back to society. Funding like transport incentives (for families who agree to come for vaccination) and for a few volunteers has been out of my own pocket.

LESSONS LEARNED

- **Persistence:** Community awareness requires patience and repeated efforts.
- **Community engagement:** Engaging community leaders and recruiting volunteers from within the community can foster acceptance.
- **Collaboration with local administrative and traditional authorities:** Local authorities and health workers play a crucial role in the success of the intervention.
- **Data utilization:** Proper data recording and analysis are vital for monitoring the success and adapting strategies as needed.

* ZDLH focus state.

TOPIC 2: Microplanning – Planning, implementing, and revising microplans as a continuous process in Nigeria and Uganda

Microplanning has been a core part of immunization programmes for decades, but the focus has not always included the importance of regularly revising plans during the course of a year to address evolving needs – and, in some locations, microplans may not even be readily available or used. A recent [mapping of pro-equity evidence](#), commissioned by Gavi, highlights a need to promote adjustment of microplans to specifically address ZD challenges.

A quote from the [microplanning brief](#) is useful to bear in mind when reading through the following case studies:

“Based on findings from primary research studies identified, microplanning, and enhancements made to existing microplanning processes, is a promising way to improve identification of and reach to zero-dose children and missed communities. Results from six effectiveness studies found meaningful increases in vaccine coverage or identification of missed communities following the introduction or enhancement of microplanning, often through the addition of digital means. Microplanning also appears to be cost-effective by leading to more efficient use of resources, with some methods being more cost-effective than others.”

IN-DEPTH MICROPLANNING CASE STUDY N2.1: REORIENTING MICROPLANNING TO BE COMMUNITY-CENTRED IN KWARE LGA (DISTRICT), SOKOTO STATE*, NIGERIA

SUBMISSION BY AMINU YAHAYA (MALE)

Project Radiance, organised in Sokoto State, has adopted a systematic but flexible approach to involve local communities in microplanning in order to reach more zero-dose and under-immunized children. A key element has been the Every Opportunity Strategy, through which traditional birth attendants and traditional barbers play an important role in identifying and reaching these children.

CHALLENGE

Past interventions have not been effective in locating and vaccinating a large number of zero-dose children (ZDC) – hence the need to reorient the development of plans to better focus on local challenges.

INTERVENTION – MICROPLANNING “PROJECT RADIANCE”

Microplanning with deep engagement with communities to create a more efficient plan for finding and monitoring ZDC.

APPLICATION OF PROJECT RADIANCE IN HEALTH FACILITIES:

Amina, an immunization officer in Kware town PHC, led the initiative in collaboration with community mobilizers, local leaders, and data analysts. The steps taken included:

- Formation of a routine immunization (RI) committee with local communities.
- Mapping out remote settlements alongside the RI committee.
- Analysing service delivery utilization patterns at each service point.
- Conducting community dialogue and focus group discussions to understand caretaker decisions and unearth latent issues.
- Community mapping to identify barriers to immunization access, revealing demographics and reasons for non-immunization.
- Using the EPI register to identify under-immunized children and develop a list of ZDC through the Every Opportunity Strategy (EOS; see below).
- Engaging community leaders in discussions with caregivers to address barriers, misconceptions, and concerns.
- Utilizing collected data to develop a targeted immunization plan.

The Every Opportunity Strategy (EOS) entails collaboration with traditional birth attendants (TBAs) and traditional barbers (TBBs) to identify and reach ZDC. They provide health workers with information about caregivers attending naming ceremonies. These naming ceremonies are line-listed and outreach sessions are planned. During these naming ceremonies, target children are vaccinated and immunization cards are issued to

* ZDLH focus state.

caregivers directing them to the nearest health facility to continue with remaining vaccine doses.

This strategy also helps in identifying newly settled families due to security issues and, with the assistance of community and religious leaders, guiding them to health centres.

CHALLENGES AND OPPORTUNITIES

- Difficulty accessing certain communities.
- The need to revise strategies and strengthen partnerships to navigate unique challenges of each area.
- Unforeseen barriers like political differences and security challenges.
- Innovation needs led to new strategies such as “baby-friendly shows”, men’s forum meetings, child adoption strategy, Every Opportunity Strategy, and naming ceremonies vaccination.

RESULTS

The situation a few months ago was concerning as many children were missed. Many deliveries happened without the child getting vaccinated. Our main challenge was reaching a large number of ZDC. With the introduction of this project and our interventions, we have seen a 10 per cent increase in ZDC visiting facilities voluntarily. Now, more children come to get their initial vaccinations. The project has demonstrated the ability to track, reach, and vaccinate many previously missed children in batches through line-lists.

LESSONS LEARNED

We learned the importance of working with community structures and leadership. Collaborating with them makes the process smoother. It is better when the community participates. Let them take the lead, guide them, and the results will be better. Community involvement addresses challenges like communication gaps, issues of missed children, caregiver consent, and other arising issues like political or personal differences and religious misconceptions.

KEY TAKE-AWAY MESSAGES

- The importance of closely collaborating with community leaders.
- The need to continuously probe and discover longstanding, hidden issues.
- Recognizing the wider positive impact of this microplanning approach on community empowerment.

CONCLUSION

Previously, microplanning was done without community involvement, which was a gap in our strategy. We decided to involve the community more, collaborating with local leaders and stakeholders. We formed a committee to understand needs better. Imams in mosques and town announcers began informing people about immunization, and

traditional birth attendants played a role too. When the community was given a more prominent role, communication improved and more families were reached.

Project Radiance and the Every Opportunity Strategy to reach zero-dose and under-immunized children is unique and promising. If adopted by others in different countries, it holds great potential. It is user-friendly, easily integrated into facilities, cost-effective, and sustainable. It is a community-driven initiative that empowers the community to find solutions to their own challenges.

The main challenges include reaching settlements and ensuring security. We have to be careful about where we go and interact with people. It is essential to decide which settlements to approach. The intervention is not money-oriented, it is local. People gather at facilities to address their problems. We have tried to determine the best ways to implement it and ensure it is sustainable and user-friendly.

QUESTIONS FROM PEERS

How can we also strengthen the capacity of traditional birth attendants (TBAs) to influence vaccine uptake? How do you incorporate those in internally displaced person (IDP) populations?

Many TBAs continue to deliver pregnant women at home, especially in distant communities with limited access to health facilities. They are respected members of the communities and could be the focus of targeted education/information on the importance of immunization of infants to prevent killer diseases and convince mothers to attend immunization sessions at health facility and outreach sites.

It would more appropriate to develop an integrated training package for TBAs on a few key topics rather than just immunization.

Communities of internally displaced persons and families usually include community TBAs who can be easily identified and trained

You mentioned that in some health facilities, caretakers are given incentives for their children's vaccination. How long will the incentives for the caregivers last? Will they cover all immunization facilities? If not, could this cause setbacks for facilities not supported to give incentives to caregivers?

This is a general question that needs to be addressed to sustain the progress made. Any such incentive approach (e.g. bed nets when MR2 is administered) should take at least a 5-year perspective (supply and delivery issues) to prevent a setback to the performance achieved.

What are the key issues for maintaining routine services, including childhood immunization?

* The use of TBAs is discouraged by some countries (and formally prohibited in Uganda). UN agencies (WHO, UNICEF, UNFPA) do not recommend that TBAs deliver pregnant women at home, preferring that they refer them to health facilities.

A repeated 5-year plan, well-designed, well-funded, with follow up and a monitoring mechanism that includes well-defined accountabilities; revisited yearly and with effective leadership.

Some traditional leaders may be willing to support the initiative free of charge while others may want to receive some stipends before getting involved. What long-term approach is needed to engage traditional leaders?

Traditional leaders need to be listened to, understood, involved in planning, execution, and monitoring through periodic review, while clarity is needed on their role and responsibilities. Any incentives allocated have to be country-specific and sustainable to avoid setbacks in programme performance.

Are rumours and information conveyed at the community level not also important to achieve zero dose?

Definitely, and they need to be acknowledged and understood. It is also important to identify the source of rumours and the trusted members of the community. The trusted members need to be briefed on why no child should be left unimmunized or under-immunized. They may offer local solutions to achieve zero zero-dose children in their community.

The foundation of the zero-dose identification process is based on Community Animation Cells (CAC) – groups of people residing in the community who know their community well. What measures are taken to motivate these CACs?

Key motivation principles include: Ensuring they understand why zero-dose is an important issue, they are clear on how to identify them and what to do (registration, listing and ensuring attendance at an immunization outreach session, confirming their immunization, and periodic face-to-face meetings with health workers to discuss progress and challenges and follow-up action).

BRIEF MICROPLANNING CASE STUDY N2.2: USING COMMUNITY ENGAGEMENT – WOMEN’S COLLECTIVES AND TRADITIONAL LEADERS IN BAUCHI STATE*, NIGERIA

SUBMISSION BY HALIMA BUBA (FEMALE)

In Bauchi State, engaging with traditional leaders and women’s collectives identified community volunteers with experience of polio vaccination, who have successfully undertaken community-based activities to identify zero-dose and under-immunized children.

Achieving complete immunization coverage, especially for zero-dose children (ZDC) and under-immunized children, remains a significant challenge in many communities. In light of the persistent gaps, an innovative approach was sought, leveraging the influence of traditional leaders and the power of women’s collectives.

CHALLENGE BEING ADDRESSED

The primary challenge was to find and vaccinate zero-dose and under-immunized children effectively, given that existing methods failed to address the issue comprehensively.

The approach adopted was based on the success of traditional leaders in identifying and tracking unimmunized and under-immunized children, which also included resolving reported ZD cases using a name-based strategy.

In addition, women’s collectives/networks have shown a considerable impact by driving peer knowledge sharing, thereby facilitating caregiver uptake of services.

Finally, A unique opportunity presented itself to utilize polio resources to enhance household identification and referral for vaccination.

THE INTERVENTION

The strategy leveraged traditional leaders to identify resident women volunteers (including polio resources) who were passionate about supporting community development initiatives.

- These volunteers undertook a meticulous house-to-house microcensus to spot children under the age of two and ascertain their immunization status.
- By comparing the microcensus data with health facility registers, it became possible to track and refer all ZD children who were previously unaccounted for in the registers.

IMPACTS

- This initiative significantly boosted the demand and uptake of routine immunization services. This uptick required a revision of health facility microplans concerning target populations and vaccine consumption.

* ZDLH focus state.

- Witnessing the success of this strategy, the Bauchi State Primary Health Care Development Agency (SPHCDA) expanded it to 20 ZD-targeted wards to identify and locate more unimmunized and under-immunized children, continuously monitoring progress.

CONCLUSION

By incorporating the influence of traditional leaders and harnessing the strength of women's collectives, significant strides were made in identifying and vaccinating zero-dose and under-immunized children. Such community-driven approaches hold promise in bridging the immunization gaps, and their continuous evaluation will be key to scaling and refining these strategies for broader impact.

ADDITIONAL QUESTIONS NOT ANSWERED

- What were the primary challenges encountered during the implementation of these interventions, especially in terms of sustainability?
- How is the efficacy of the community engagement approach gauged?
- What are the key lessons extracted from this experience?

BRIEF MICROPLANNING CASE STUDY N2.3: BUILDING CAPACITY TO REACH ZDC AND MISSED COMMUNITIES IN KANO STATE*, NIGERIA

SUBMISSION BY DR AHMAD TIJJANI HABIBU (MALE)

In Kano State, high-level prioritization of zero-dose children led to a cascade training model to promote community involvement in microplanning, with line-listing seen as critical to success in reaching more children.

Kano State, Nigeria, grapples with the challenge of having the highest number of zero-dose children (ZDC) in Nigeria. With an estimated 333,079 ZDC across 15 LGAs, there is an urgent need for a tailored approach to ensure each child receives their necessary vaccinations.

CHALLENGE

The core issue lies in developing precise microplans centred on ZD challenges and making sure these plans are verified to fit the diverse local situations.

Kano State's daunting figure of 333,079 ZDC underscores the critical importance of this intervention, ensuring that the biggest state in terms of ZDC in Nigeria addresses its challenge comprehensively.

THE INTERVENTION

- A cascading training method began with a training of trainers (TOT) for state facilitators specializing in zero-dose microplanning.
- State facilitators then extended training to LGA staff.
- This training trickled down to health workers and ward focal persons at ward levels.
- The culmination of this training was the collaborative development of a microplan involving health workers, ward focal persons, and community leaders. This microplan ensured that every zero-dose child in each settlement was line-listed.
- A daily implementation plan (DIP) was developed to guide teams, ensuring comprehensive coverage.
- Health workers and ward focal persons submitted these microplans to the LGA for verification. The state team then verified and costed the collated plans.
- Implementing the microplans followed the IRMMA framework - Identify, Reach, Measure, Monitor, and Advocate.

CHALLENGES ENCOUNTERED

- Delays in securing operational funding.
- Inadequate bundling of vaccines and devices.

* ZDLH focus state.

- Insufficient community mobilization and demand generation at ward levels.

MEASUREMENT OF SUCCESS

Kano's ZD microplanning witnessed validation from NPHCDA and significantly contributed to reaching ZD children in a recent routine immunization intensification campaign. The key metric for success was the marked increase in the number of ZDC reached during the campaign.

LESSONS LEARNED

- A critical step to ensuring ZDC receive immunization services is identifying and line-listing them.
- Using data about reached ZDC is instrumental in advocating for enhanced support and funding.

CONCLUSION

The ZD microplanning process in Kano State demonstrates the importance of tailored interventions in tackling large-scale health challenges. By identifying gaps, implementing a structured training process, and continuously reviewing results, Kano State is making commendable strides in reducing the number of zero-dose children. Such targeted efforts can serve as a model for other regions grappling with similar challenges.

2.2: UGANDA

TOPIC 1: Integration - Maximizing opportunities to reach zero-dose children and missed communities

IN-DEPTH INTEGRATION CASE STUDY U1.1: USING ANTENATAL CARE (ANC) DATA TO FOLLOW UP ON BIRTHS AND REACH ZERO-DOSE CHILDREN AT A HEALTH FACILITY, KOTIDO DISTRICT, UGANDA

SUBMISSION BY SCOVIA OKELLO (FEMALE)

By making a note of expected due date during ANC visits, facilities can determine whether a mother has delivered within the community rather than in a facility. Village health teams, community-based volunteers, can then follow up on such women to ensure that their babies are vaccinated.

This strategy involves using ANC data to track expected delivery dates (EDD) of mothers and ensure the immunization of their children. This intervention was born from the realization that an opportunity was being missed if ANC registration data were not used to track expected delivery dates (EDD) and follow up on births.

CHALLENGE

Identify and reach children born at home from women that had attended at least one ANC session at the health facility during their pregnancy. The critical question was: How can healthcare systems ensure that all women who come for ANC are followed up after giving birth to ensure their children receive their vaccines?

IMPLEMENTATION STEPS

The following approach is used:

- **Documenting EDD:** During ANC attendance, the EDD of pregnant women is documented.
- **Tracking mothers:** If a woman does not return within a month from her EDD, it is assumed she has delivered elsewhere.
- **Engaging village health teams (VHTs):** VHTs, along with other community leaders, are enlisted to investigate the situation. They help to locate mothers who have delivered at home and collect vital information.
- **Ensuring immunization:** During immunization sessions (static or outreach), VHTs and other leaders ensure that children born at home receive the necessary vaccinations.

IMPLEMENTATION CHALLENGES

Many mothers are unaware of their EDD, so estimations have to be made. Additionally, factors such as community mobility, insecurity, and long distances to healthcare facilities contribute to dropout rates.

LESSONS LEARNED

- The significance of regular data review. Weekly data analysis helps the team monitor progress and make informed decisions.
- Engaging community leaders, including traditional and religious leaders, proved effective in mobilizing and educating mothers about healthcare benefits.
- The role of fathers as key stakeholders in immunization was acknowledged, highlighting the need for targeted messaging and engagement strategies.

CONCLUSION

This initiative demonstrates the potential of leveraging ANC data to reach zero-dose children and bridge the immunization gap. It also underscores the importance of data-driven decision-making, community involvement, and innovative strategies in achieving equitable immunization coverage.

QUESTIONS FROM PEERS

What is the estimated number of zero-dose children (ZDC) in your rural area? Do they concentrate geographically in specific communities? How did you find out? And how did you confirm your findings?

We don't really know the number of ZDC because we don't have accurate data to rely upon and we are not really sure if they concentrate geographically or not. But looking at our available data showing a very high ANC1 reported coverage and much lower health facility delivery coverage, we believe many mothers of ZDC attend ANC and don't deliver at health facility level and don't bring their child for Penta1.

We did not do any special study to confirm our assumptions as it was based upon a data review of number of ANC1 visits and number of Penta1 doses administered.

Estimating the number of ZDC in an area served by a health facility and assessing their potential clustering would be very useful to set objectives, focus efforts, optimize resources available, and reduce the number of ZDC. A mix of methods, such as reported data, any local coverage survey data, including local knowledge, can help a lot. Hypotheses can be confirmed with a local LQA coverage survey or area-focused home visits. It may be more challenging in health facilities of urban areas, as a mother and child may not use the facilities serving their residence. Local health worker knowledge will then be very useful, especially if confirmed by rapid local surveys.

Do you know why mothers of ZDC attend ANC but do not bring their child for immunization? Who are these mothers?

Given the high number of pregnant women attending ANC, we took this as an opportunity to track ZDC when the mothers did not show up after their expected delivery date and assumed that these are cases of home delivery.

This is mainly due to insecurity and long distances. To improve health facility delivery: (a) we use a voucher system to transport mothers in labour to the facility; (b) give mothers incentives when they deliver their babies at the facility.

How do you track mothers of ZDC who do not attend ANC and do not deliver in a health institution?

The majority of women attend ANC – only a few do not. However, there are some possible approaches to reach all pregnant women depending on local area specifics, such as:

- Trained community health workers register pregnant women and newborns periodically and follow up immunization status.
- Mobile messaging to pregnant women as reminders to immunize their infants.
- Ensure regular outreach immunization sessions in each community to ensure access to vaccination and follow up of vaccine doses.

How do you manage the village health team to track the ZDC regularly? Do you provide sustainable financial incentive? Do you cover the “logistics needs” to do home visits and registration? How is the follow up and liaison with the health facility vaccinator carried out?

We use Primary Health Care quarterly funds to support them and also provide fuel for their transportation to the communities. However, these issues are area- and facility-specific. These questions highlight the need to ensure sustainable and effective activity through motivated and competent community health workers or village health teams, with periodic contact with health facility vaccinators and staff to address issues and highlight the importance of their tasks and responsibilities in immunization infant and maternal health.

Why are community workers often not engaged in house visits to systematically identify and register births?

This is an ideal strategy but in some countries and in some contexts it is very challenging. Community health workers are often volunteers without a fixed salary for their work. They tend to be used for special needs such as SIAs, MCH weeks, and nutrition events, with very specific tasks. They only received a small incentive for the event, insufficient to cover family needs. They do other regular income-generating tasks to support their family.

These community workers may not always have the literacy skills and knowledge to fill an immunization register book. In urban areas, they are sometimes insufficient in number to cover the workload, given the number of households to be visited periodically to register pregnant women and infants.

In the near future, given their needed support for multiple health and life-saving interventions, and the WHO universal health coverage goal objectives, they may join the health system and receive a salary with a job description (e.g. extension workers in Ethiopia, community health workers in Sierra Leone) if financially feasible for a country.

In some countries, ZDC are detected and registered through a one-time massive home visit exercise in urban areas similar to a census, but such periodic exercises to detect ZDC cannot be maintained without trained, motivated, and incentivized community workers.

Is there a special register or method to register and follow up pregnant women who may not attend ANC and not bring their newborn for immunization?

We have improvised a register to capture information in relation to following up with pregnant women who visit our health facility for ANC. This is in addition to the regular ANC register that captures information on the woman's place of residence, next of kin and mobile phone number if available. The expected date of delivery is determined. If the newborn has not been received for vaccination one month after the EED, we assume that she has delivered at home or elsewhere. We inform the VHT based on the information in the register to visit the community to locate the mother and her newborn so that during outreach the child may receive the required doses of vaccines.

In urban settings it is a more complex process given that a woman may attend ANC in one facility and vaccinate her child at another. However, the information collected at ANC allows a checking on child immunization status and determination of corrective measures through close collaboration between health facilities.

The manual way of data collection on mothers' ANC records seems so tiresome. Have you considered the use of electronic health information?

No, because we do not have resources like computers and other software that are needed for electronic immunization data registration.

How can traditional birth attendants help in the management of ZDC?

Yes, we advise traditional birth attendants (TBAs) to encourage mothers to bring children for immunization when they deliver from home.

However, UN agencies (WHO, UNICEF, UNFPA) do not recommend that TBAs deliver pregnant women at home, preferring that they refer them to health facilities. This is because of the lack of evidence that TBAs are able to save mothers' lives. However, communities often place great trust in TBAs, and they can play important roles in supporting other aspects of maternal, newborn, and child health. Providing education and guidance to TBAs to promote immunization and check a child's immunization status (including for Penta1) is one example of how TBAs can help health workers with identifying and following up on ZDC.

BRIEF INTEGRATION CASE STUDY U1.2: INTEGRATION OF SERVICES AND SPECIAL OUTREACHES AT COMMUNITY EVENTS AT A HEALTH FACILITY IN KUMI DISTRICT, UGANDA

SUBMISSION BY AKELLO REBECCA (FEMALE)

A facility has shown how involving community leaders and community-based volunteers can underpin a community-centric approach to encourage take up of health services, including immunization.

CHALLENGE

The principal challenge was to ensure that no child in the target age group was overlooked for vaccination, especially if they engaged with any primary health care (PHC) service or attended community events.

APPROACH

To address this challenge, the health facility leveraged its connections with the community. The strategy was to identify all children of the appropriate age for vaccination and link them to immunization services. This initiative was carried out not just within the health facility's outpatient department and inpatient wards but also extended to local churches and even burial ceremonies.

For effective identification and reach, the facility collaborated with village health teams (VHTs), which comprise community health volunteers. In tandem with this, notifications were sent to church leaders regarding upcoming outreaches and the specific age group targeted. This allowed church leaders to make announcements during prayer sessions. The emphasis was also placed on parents or caregivers bringing immunization child cards with them. At burial places, VHTs utilized microphones to mobilize attendees for the scheduled outreach.

IMPLEMENTATION CHALLENGES

A significant impediment was the lack of resources, especially to facilitate the involvement of all stakeholders. Often, the health facility found it challenging to offer transport or allowances for the VHTs and community leaders. Consequently, they had to rely on a limited number of volunteers and leaders who were willing to work without compensation.

EVALUATION OF SUCCESS

The effectiveness of this strategy was assessed by monitoring vaccine trends through vaccine monitoring charts. These charts displayed whether the vaccination rates were increasing or decreasing. Encouragingly, except for BCG, all antigens showed an increasing trend.

LESSONS LEARNT

- Self-motivation is paramount in challenging situations. Motivating oneself and inspiring others is key to achieving set goals.
- Providing feedback to stakeholders is not just beneficial but essential. It not only motivates them but also fosters a sense of ownership of the programme.

CONCLUSION

Ensuring that every child receives vital vaccinations is crucial for their health and the well-being of the community. By integrating community outreach and engagement into its vaccination programme, the health facility demonstrated that innovative, community-centric approaches can effectively address challenges in healthcare delivery. While resource constraints posed difficulties, the lessons learned from this initiative provide valuable insights for similar programmes in the future.

BRIEF INTEGRATION CASE STUDY U1.2: HOW TO REACH ZERO-DOSE CHILDREN WHEN CARETAKERS ARE BUSY IN A HEALTH FACILITY AT KASESE DISTRICT*, UGANDA

SUBMISSION BY ANONYMOUS (FEMALE)

In Kasese District, dialogue with the community – busy during the day with fishing activities – led a facility to propose home-to-home immunization, an approach better suited to the community's needs.

Integration in healthcare often focuses on merging and coordinating multiple health services to ensure comprehensive care, especially in challenging environments or situations. Addressing the challenge of vaccinating zero-dose children (ZDC) in Kasese District, Uganda, especially when caretakers are busy, required a flexible and community-centred approach.

CHALLENGE

At fishing landing sites, caregivers are typically occupied with fishing activities, making it difficult for them to bring their children for vaccinations.

Busy caretakers were identified as a significant obstacle in reaching vaccination targets, thereby leading to zero-dose and under-immunized children. Prior to the intervention, it was observed that despite efforts to set up outreach sites on specific days, turnout was low due to the community's busy fishing schedule. The traditional method of having fixed days for vaccinations wasn't effective in this context.

APPROACH

Community engagement: The first step was to engage the community directly. Meetings were organized with community members, local councils, and village health teams (VHTs, community health volunteers). The idea of home-to-home immunizations was proposed.

House-to-house immunizations: With community input and approval, it was decided to conduct house-to-house immunizations. This method was well-received, and the community was supportive.

Collaboration with VHTs and peers: VHTs and peers played a crucial role in notifying health workers when babies were at home, ensuring that no child was left out.

Flexible immunization schedule: The intervention abandoned specific days and times for immunization at static/fixed sites. Instead, a flexible schedule was adopted where children could be vaccinated at any time they were available.

Screening at health facilities: For those who visited health facilities for other reasons, screening was conducted at the reception to identify babies in need of vaccination.

* ZDLH focus state.

Encouraging immunization cards: Caretakers were advised to always bring the immunization cards of their children whenever they visited health facilities. This ensured that health workers had a clear record of each child's vaccination status and could act accordingly.

CONCLUSION

this intervention demonstrates the importance of community engagement and flexibility in immunization service delivery. By tailoring the approach to the unique challenges and lifestyle of the community, health workers were able to ensure that zero-dose children were not left behind.

TOPIC 2: Microplanning – Planning, implementing, and revising microplans as a continuous process

IN-DEPTH MICROPLANNING CASE STUDY U2.1: ENHANCING VILLAGE-SPECIFIC IMMUNIZATION THROUGH MICROPLANNING AND COMMUNITY INVOLVEMENT IN A HEALTH FACILITY IN KASESE DISTRICT*, UGANDA

SUBMISSION BY EDWIN MBUSA (MALE)

In Kasese District, health facilities have been encouraged to develop microplans specific to individual villages, to involve community volunteers in development of village-specific microplans, and to ensure they are regularly updated.

CHALLENGE

How to better identify underserved villages and make immunization strategies suitable for individual villages rather than generalizing.

In the pursuit of improving health outcomes, many villages remain underserved when it comes to reaching zero-dose and under-immunized children. The challenge lies in the generalization of strategies across villages, rather than tailoring them to individual village needs.

THE INTERVENTION

The central intervention revolved around the use of a microplan template designed to guide health facilities in planning immunization strategies for each village based on their unique needs. Before this, we had noticed that during microplanning, certain children were being overlooked.

To address this, microplans were revised and community involvement was enhanced by engaging village health teams (VHTs), essentially community health volunteers, with two designated for each village. Their role involved house-to-house visits, registering children starting from birth, and checking their vaccination cards to determine their immunization status. This deep community involvement highlighted the need to establish more outreach posts to cater to more remote areas.

Continuous improvement was another facet of the intervention. The health facility prioritized regular updates to the microplan, with the latest revision occurring within the past three months, ensuring timely solutions to emerging issues.

IMPLEMENTATION CHALLENGES

The primary challenge faced during implementation related to budget constraints. There was a noticeable lack of funds allocated for community-based activities like facilitating

* ZDLH focus district.

the VHTs. Despite their critical role in bridging the gap between health workers and the community, the VHTs often felt unsupported and fatigued.

MONITORING AND ANALYSIS

Post-implementation, there was a notable increase in reaching zero-dose and under-immunized children within three months.

CONCLUSION

The tailored approach of village-specific microplanning, combined with active community involvement, shows promising results in addressing the immunization gaps in underserved villages. The intervention underscores the importance of community health volunteers like VHTs, suggesting that prioritizing community activities in budget allocations is essential for success. Future implementations should consider these findings and continuously seek feedback from the grassroots level to refine and expand the approach.

BRIEF MICROPLANNING CASE STUDY U2.2: REDESIGNING OUTREACH, LINKED TO MOBILIZERS IN A HEALTH FACILITY, ISINGIRO DISTRICT, UGANDA

SUBMISSION BY MUHANGI AMBROSE (MALE)

A health facility has used “Reach Every Child” guidance to introduce a more systematic approach to its microplanning to reduce the numbers of zero-dose and under-immunized children.

CHALLENGE

Despite holding regular immunization sessions, the health facility noticed its immunization coverage was falling short. Without a clear understanding of the root cause of this issue, they sought to identify and address the problem through an innovative approach.

The facility adopted the “Reach Every Child” microplanning strategy. By refining their outreach plan, they prioritized distant villages with efficient mobilizers, ensuring that more children were reached and served.

THE INTERVENTION

A systematic strategy was initiated by the health team:

- Line-listing of all children under one year of age across all villages, so the children could be monitored and followed up effectively.
- Based on the distribution of children and the line-listed data, the number of weekly sessions was increased from one to four. This ensured that all the children were catered for and received their necessary vaccine doses.
- Villages were mapped, and outreaches were assigned to specific, efficient mobilizers.
- After each session, mobilizers followed up using a list to track and manage missed appointments in the upcoming sessions.
- A commitment was made by the team to hold monthly performance reviews. This helped in validating their data and plans, ensuring a structured approach to their activities.
- Microplanning was central to the strategy, providing a clear structure to activities. This allowed for targets to be reviewed and adjusted based on monthly and quarterly analyses.

While the redesigned outreach strategy appears promising, certain challenges inherent in its implementation remain unanswered. Key among them are the obstacles faced during outreach redesigns, the metrics and data used to monitor the success of these outreaches, and any lessons the facility has derived from this experience.

CONCLUSION

By adopting the “Reach Every Child” microplanning approach, the health facility showcased the potential of tailored strategies in addressing immunization coverage gaps. Through diligent planning, increased sessions, and efficient mobilizers, they were

able to better reach and serve their target audience. Continued evaluation and monitoring are crucial to ensure the long-term success and adaptability of this approach.

ANNEX 3: ANALYSIS OF ZERO-DOSE QUESTIONNAIRE DATA

When registering for ZDLH-X1 and -X2 events, participants completed a questionnaire about themselves, their local settings, local zero-dose challenges, and their learning objectives. This section presents a combined analysis of data collected before each event.

CHARACTERISTICS OF PARTICIPANTS

Figure 1: Location of participants. Participants were drawn from at least 56 different countries (n=1192).

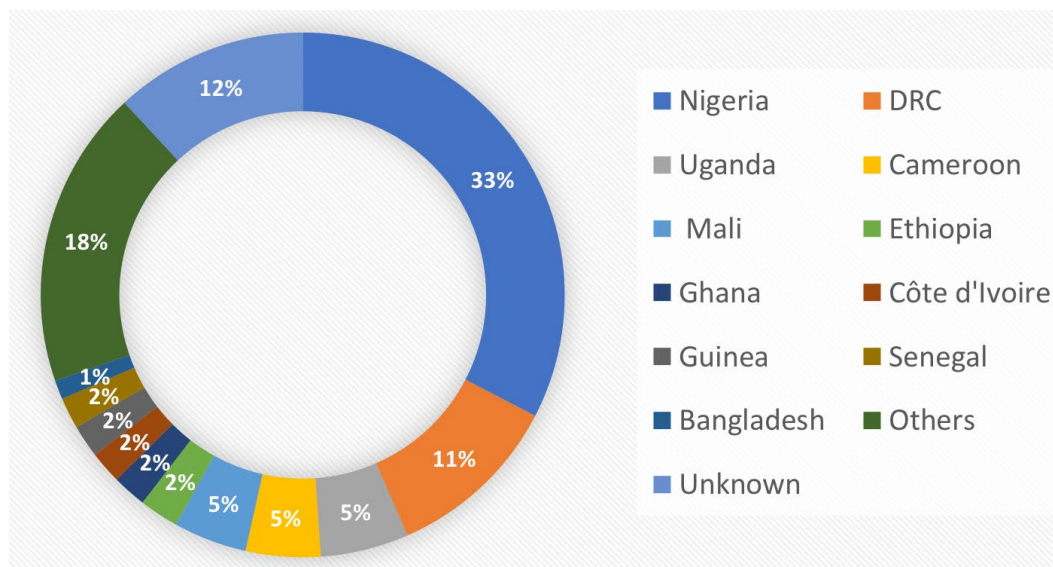


Figure 2: Level of the health system at which respondents work (n=1192).

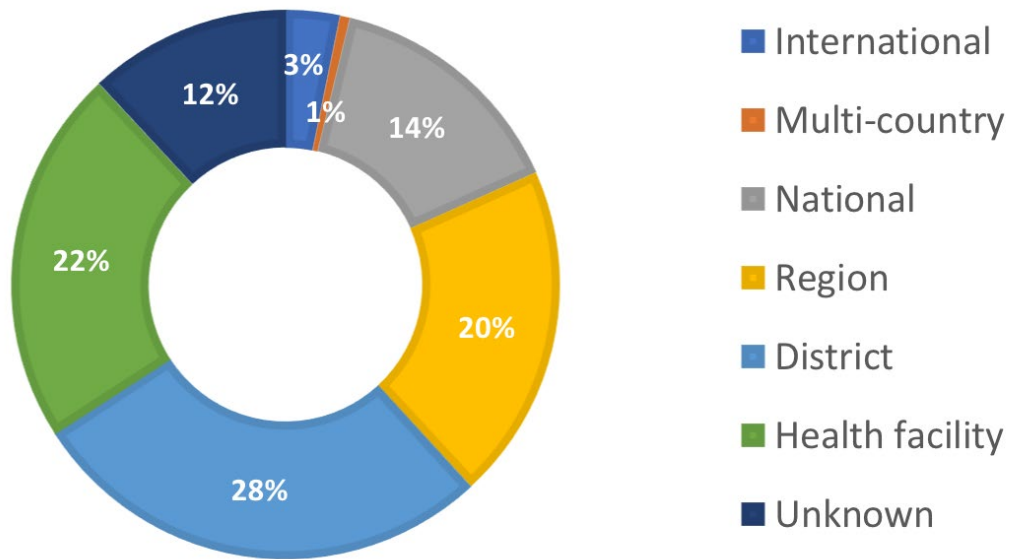
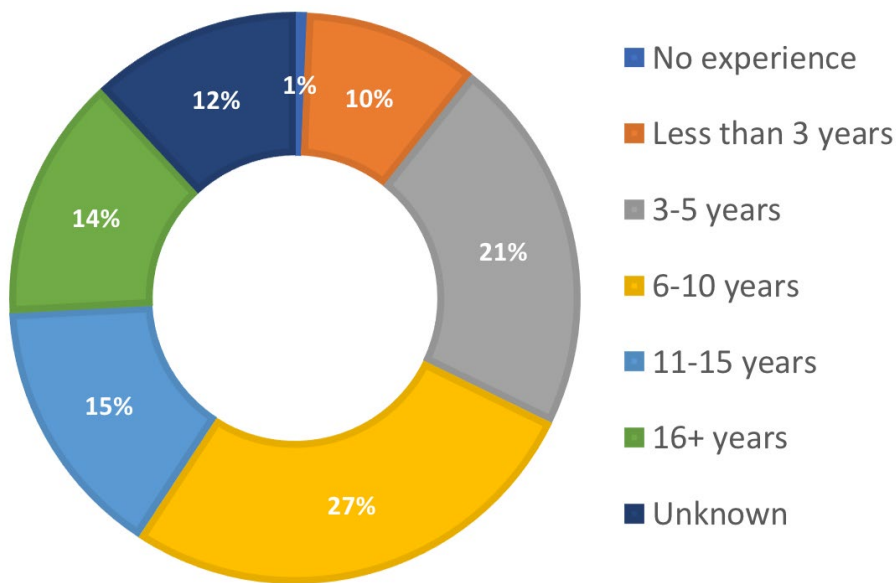


Figure 3: Respondents' years of experience (n=1192).



LOCAL CONTEXT

Figure 4: Percentage of respondents reporting having a workplan or microplan describing ongoing activities to reach zero-dose children or the hard-to-reach, by focus country (top; n=1034) and by focus district in Nigeria and Uganda (bottom; n=112).

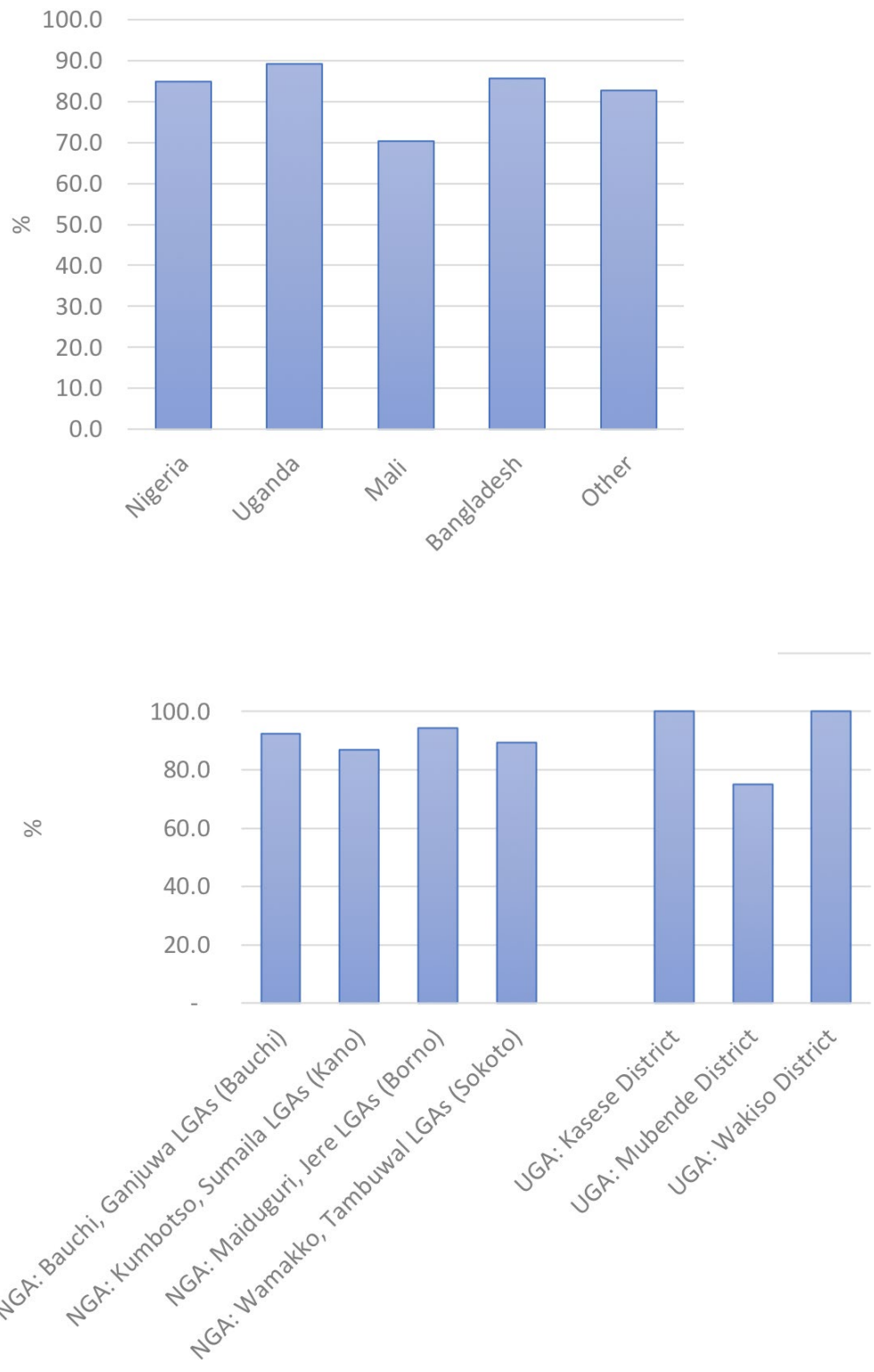


Figure 5: Choice of primary zero-dose challenge (percent of all survey respondents; n=1034).

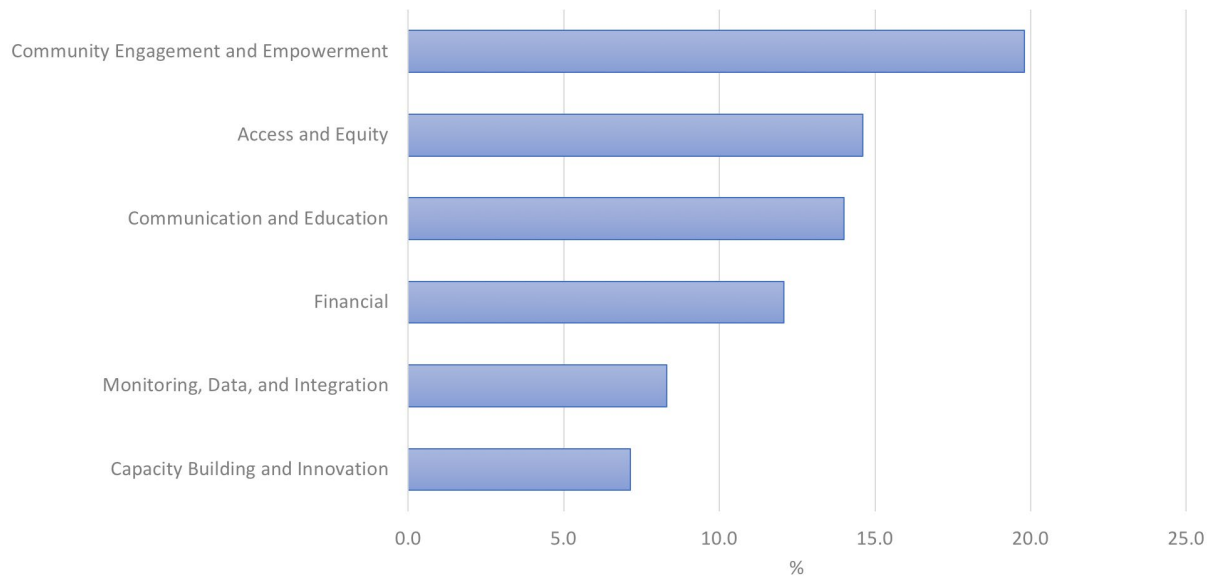


Figure 6: Choice of primary zero-dose challenge, broken down by target country (percent of all survey respondents from each country).

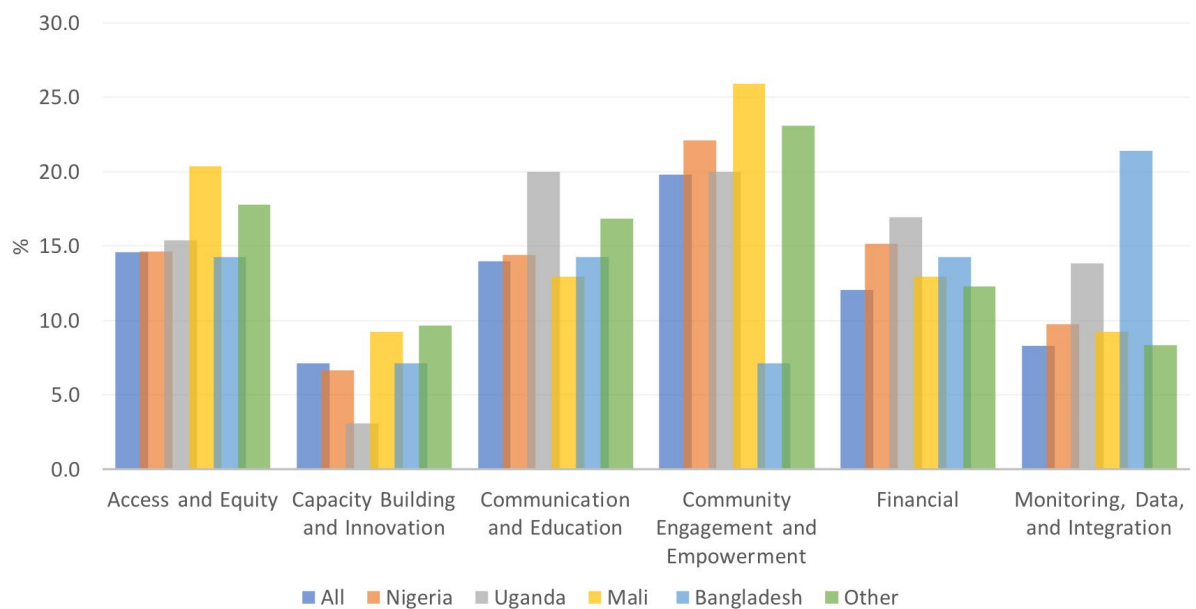


Figure 7: Choice of primary zero-dose challenge, broken down by target district (percent of all survey respondents from each district).

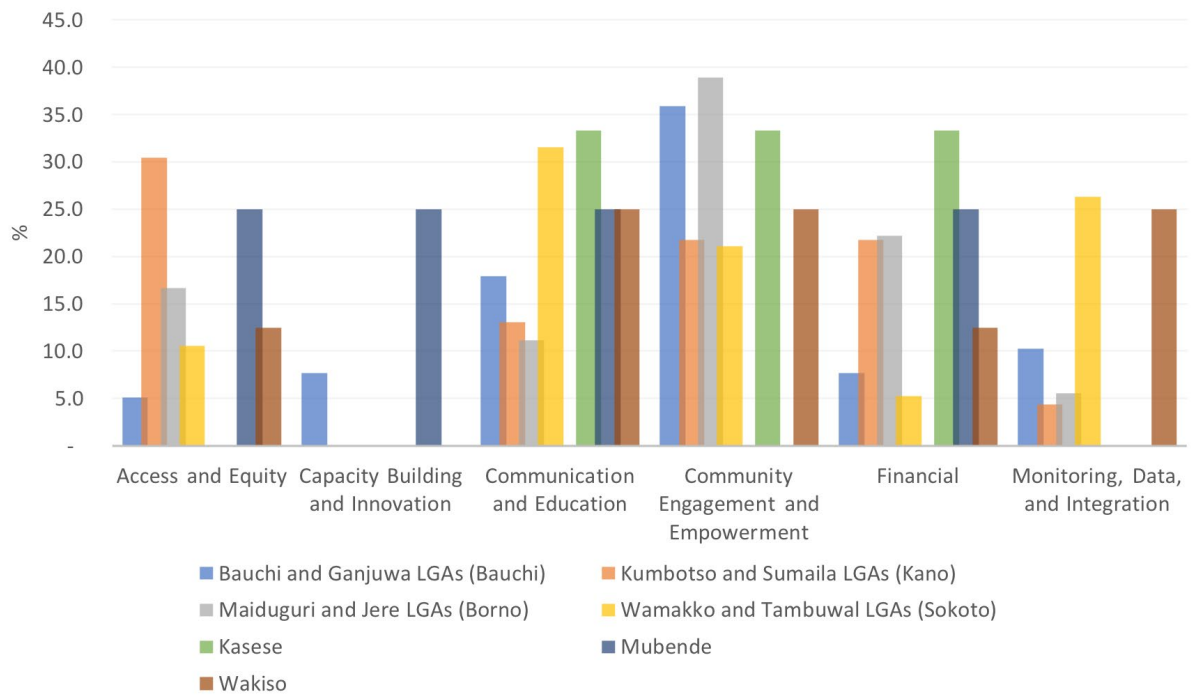


Figure 8: Most important issues underlying local zero-dose challenge (percent of all survey respondents; n=1034); respondents could select more than one issue.

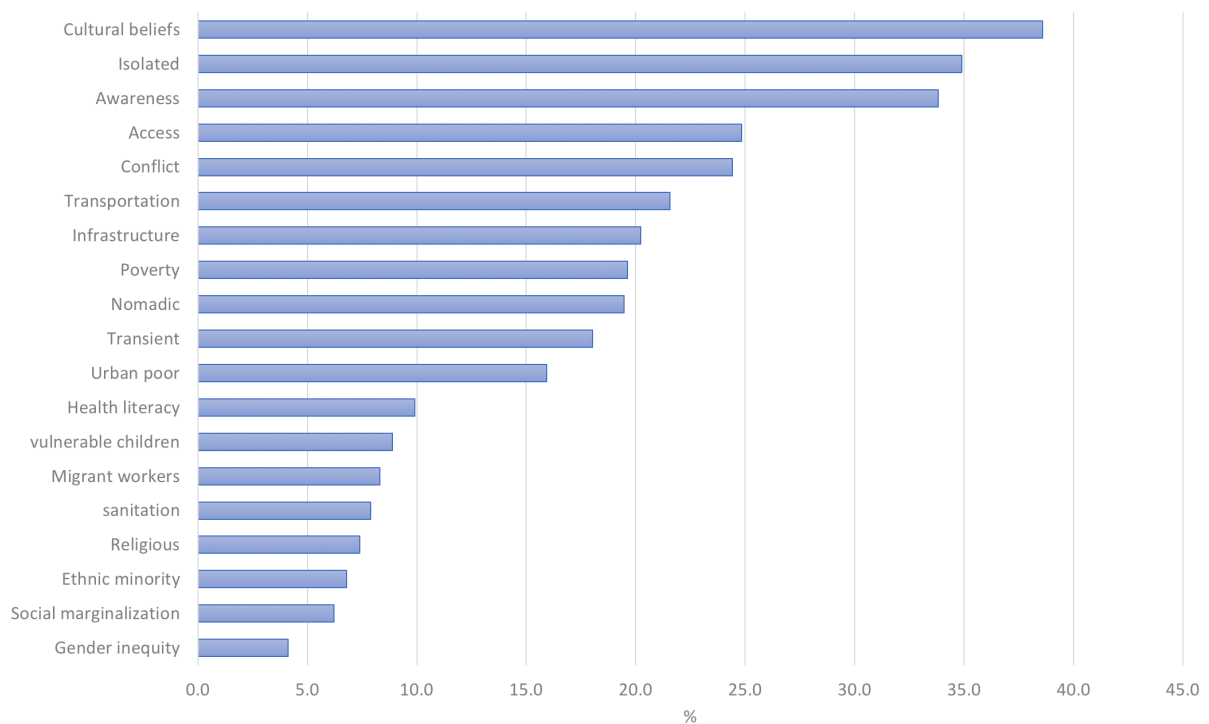


Figure 9: Most important issues underlying local zero-dose challenge, broken down by country (percent of all survey respondents from each country); respondents could select more than one issue.

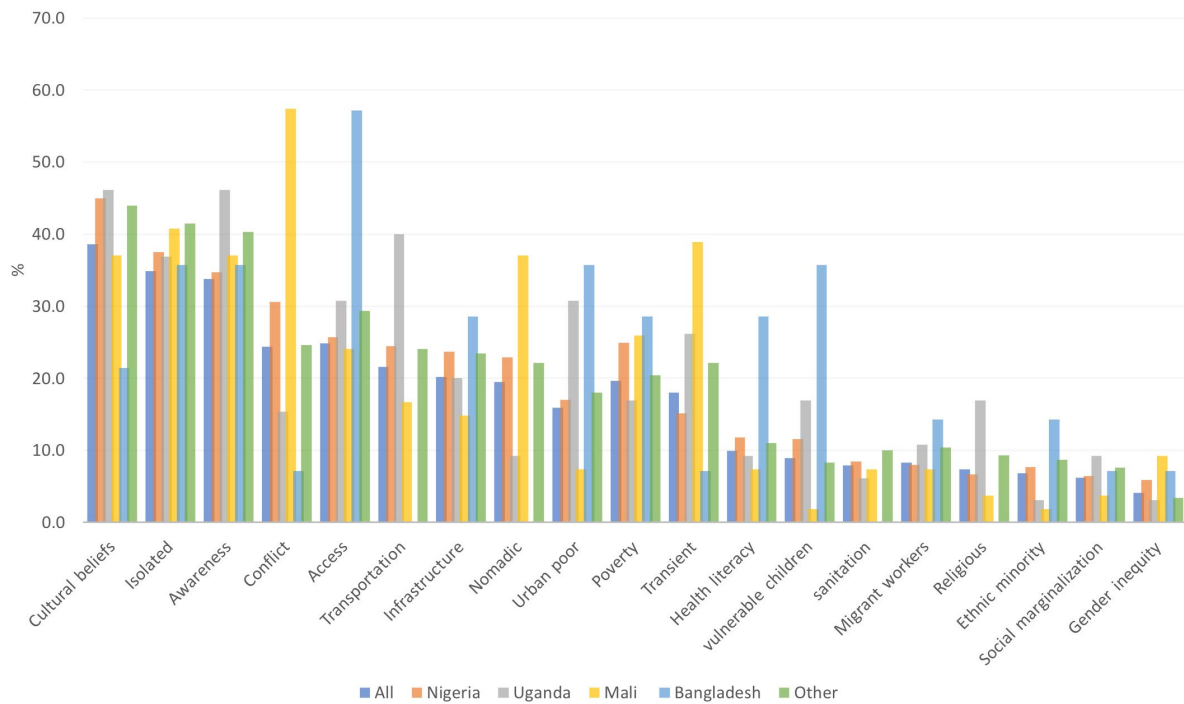


Figure 10: Most important issues underlying local zero-dose challenge, broken down by target district (percent of all survey respondents from each district); respondents could select more than one issue.

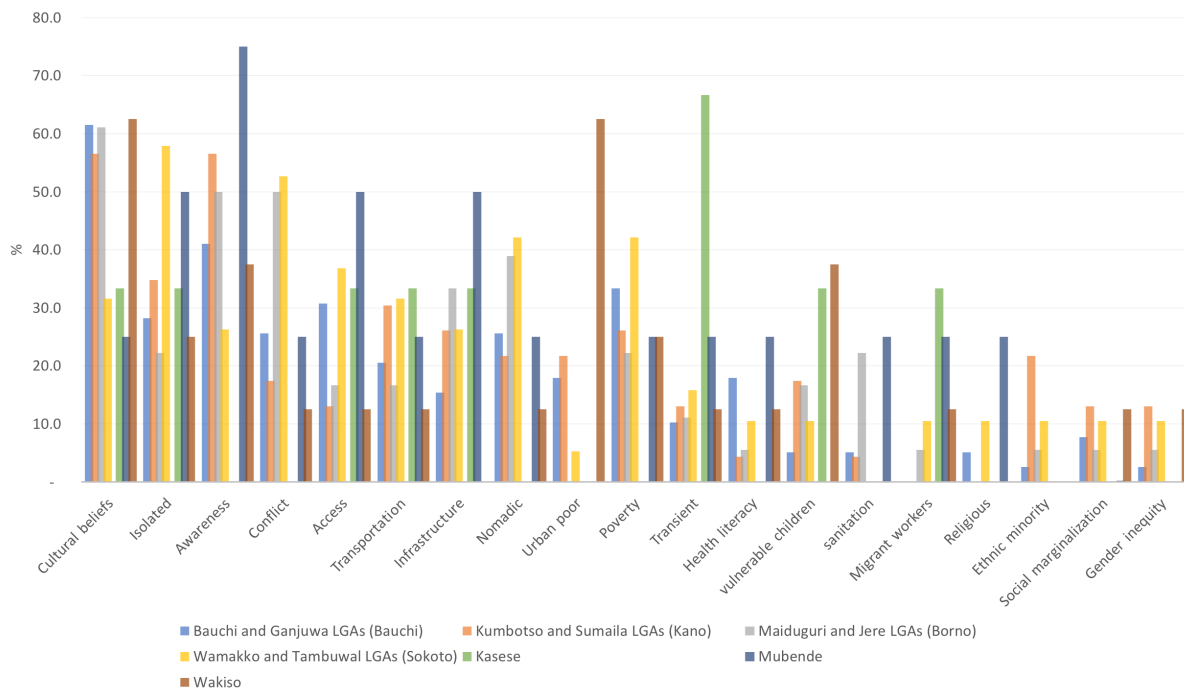


Figure 11: Most promising practices undertaken to read zero-dose children and missed communities (percent of all survey respondents; n=1034); respondents could select more than one issue.

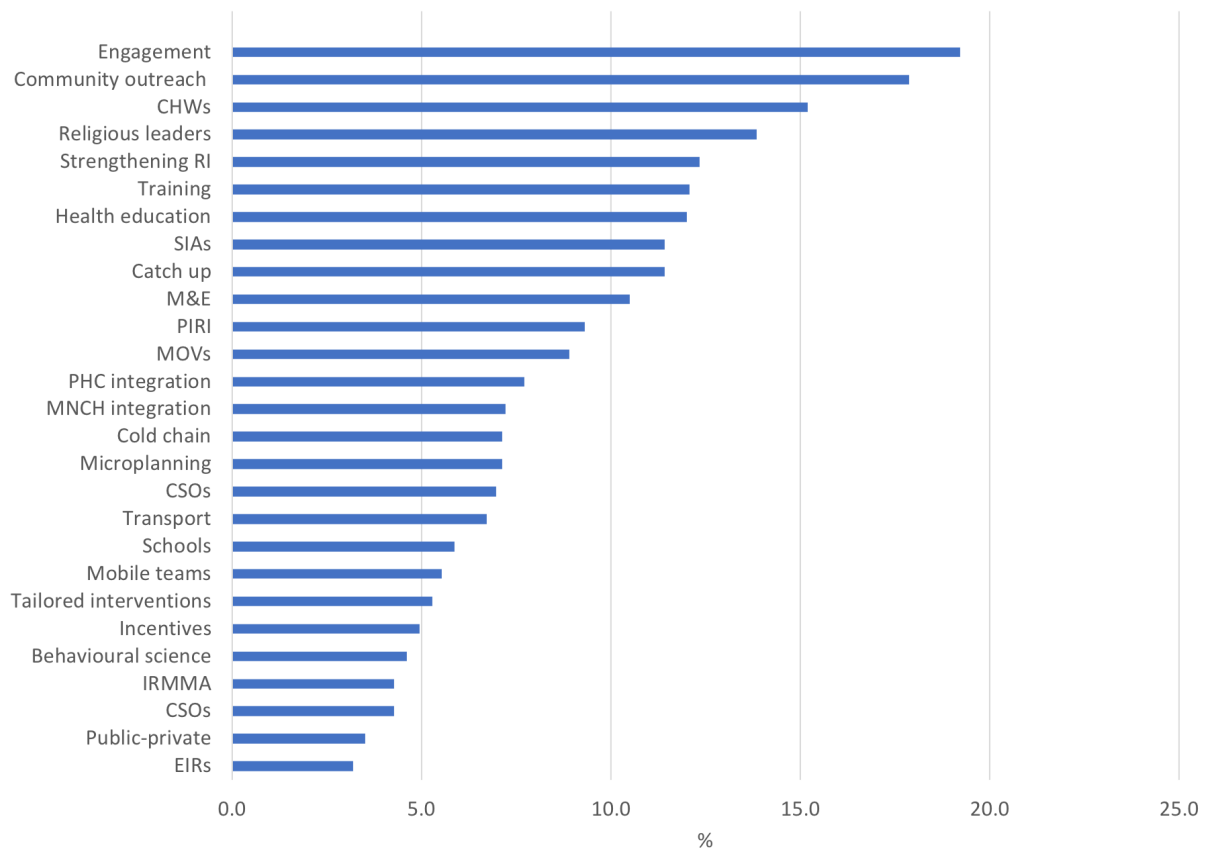
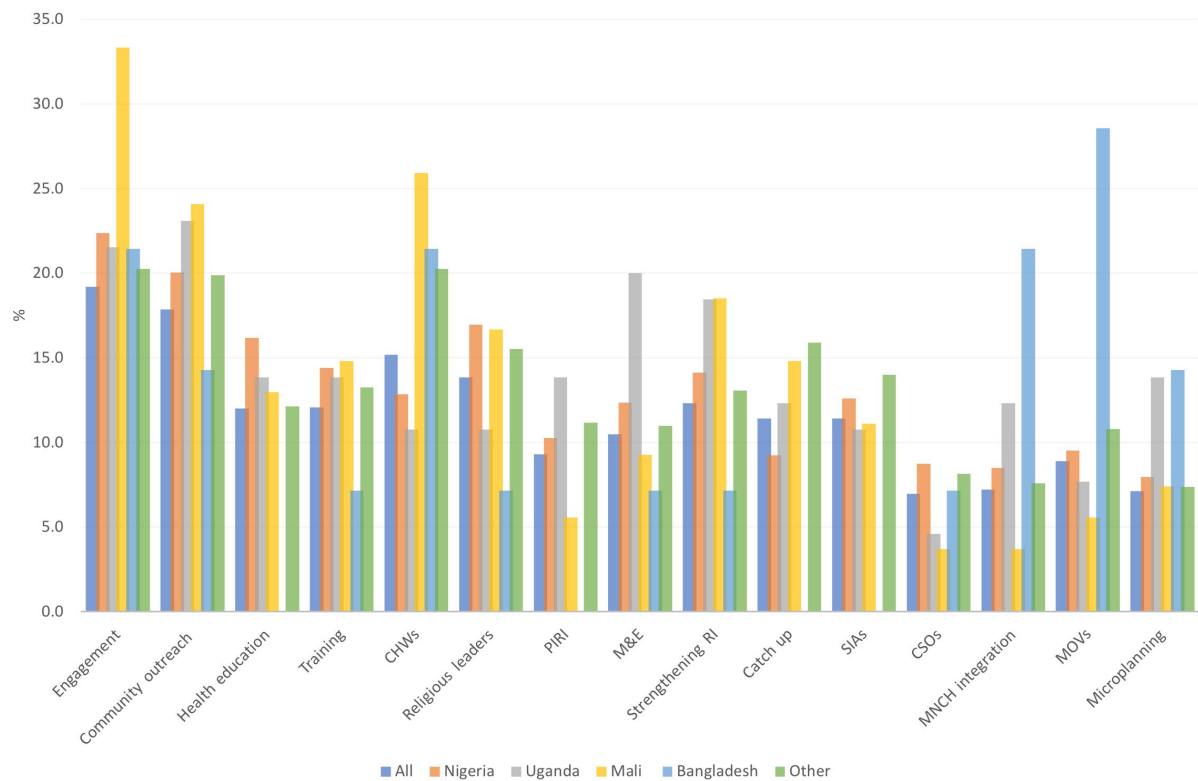


Figure 12: Most promising practices undertaken to read zero-dose children and missed communities, broken down by target country (percent of all survey respondents from each country); respondents could select more than one issue.



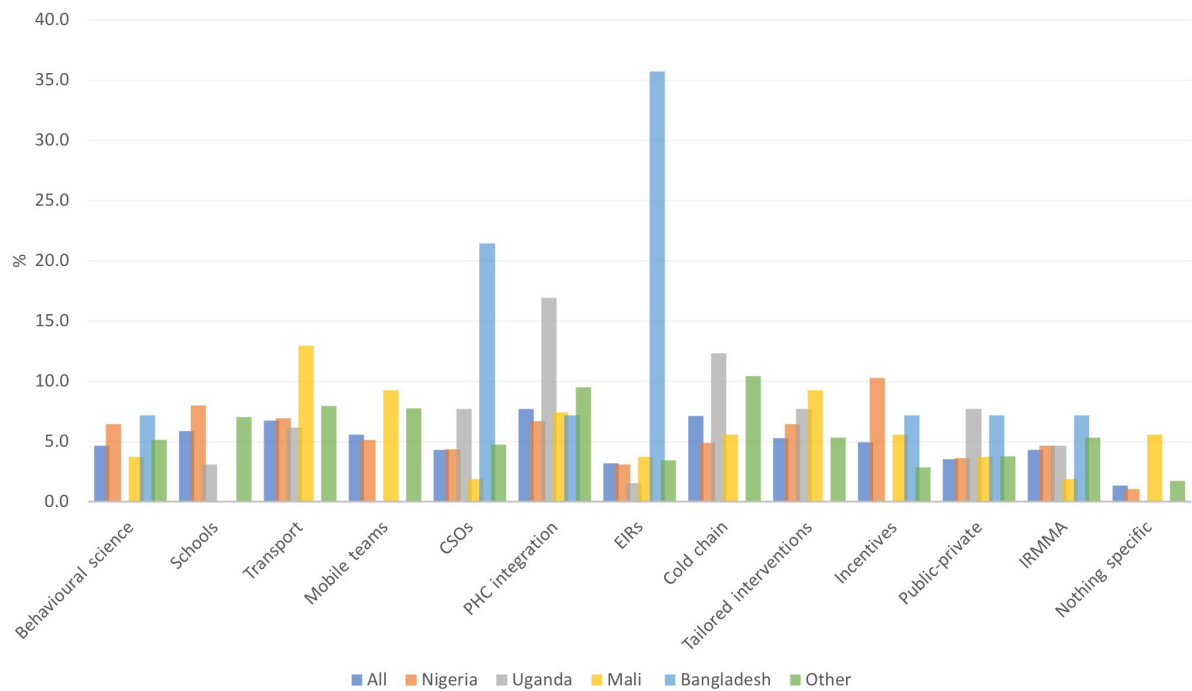
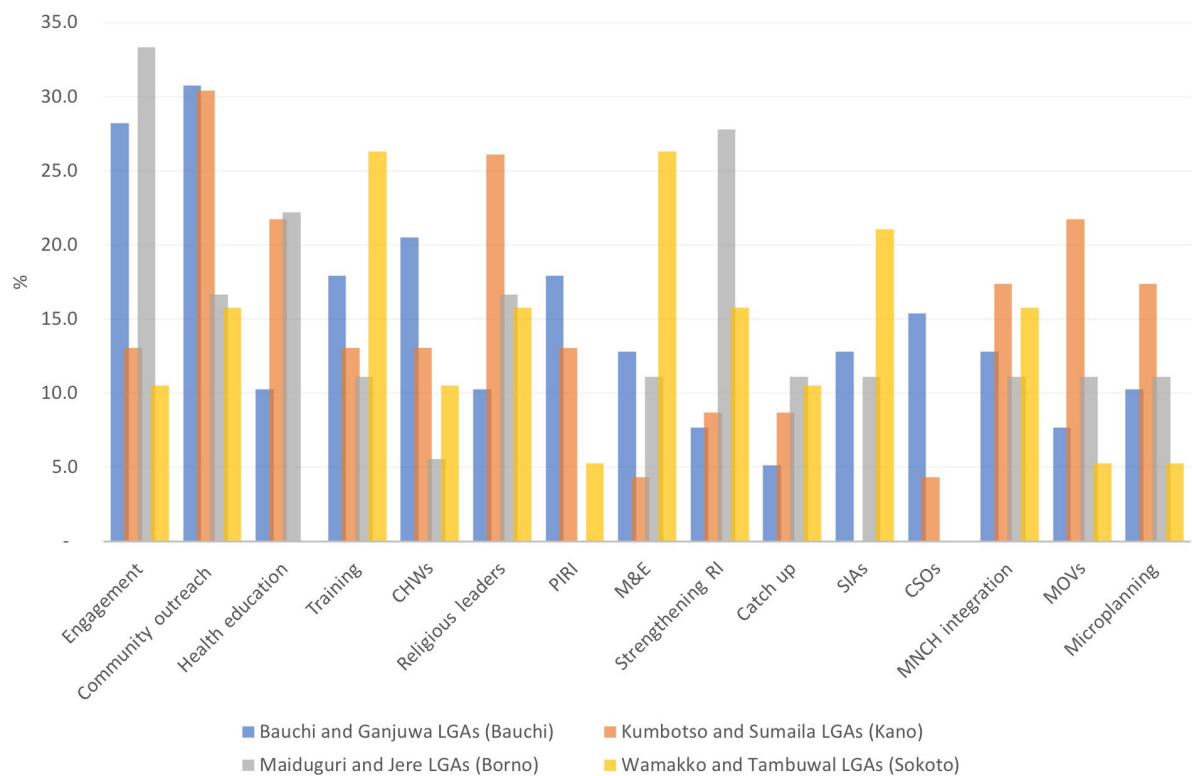


Figure 13: Most promising practices undertaken to read zero-dose children and missed communities, broken down by Nigerian target district (percent of all survey respondents from each district); respondents could select more than one issue.



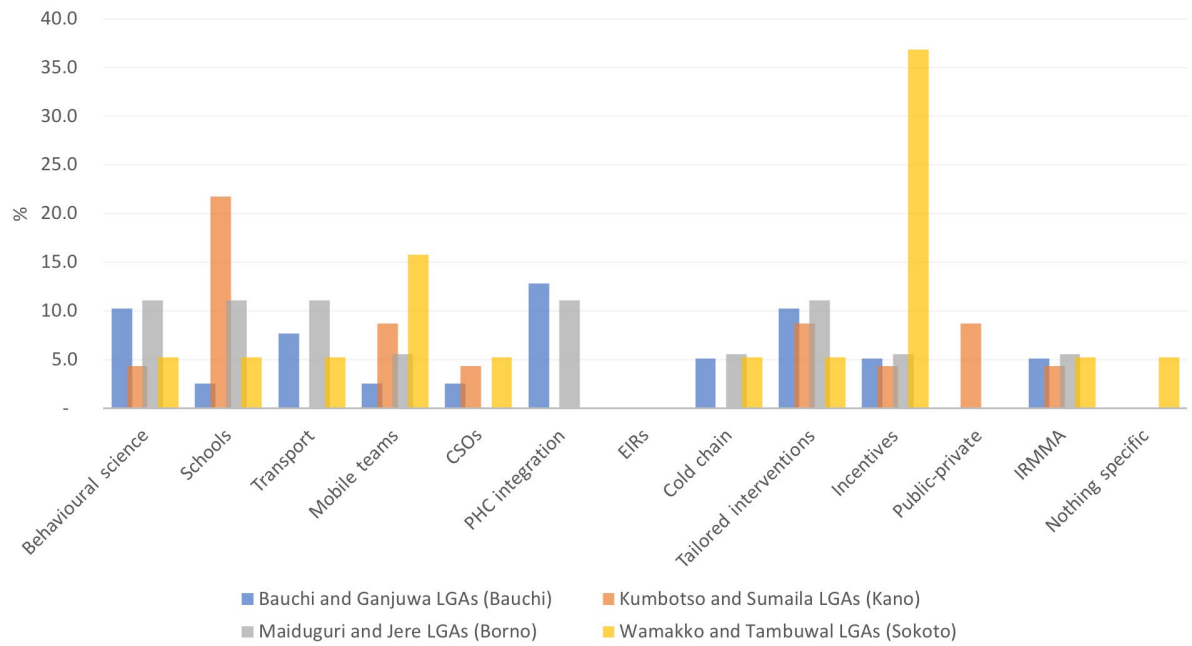


Figure 14: Most important topic that respondents were interested in learning about from colleagues (percent of all survey respondents; n=1034), all respondents.

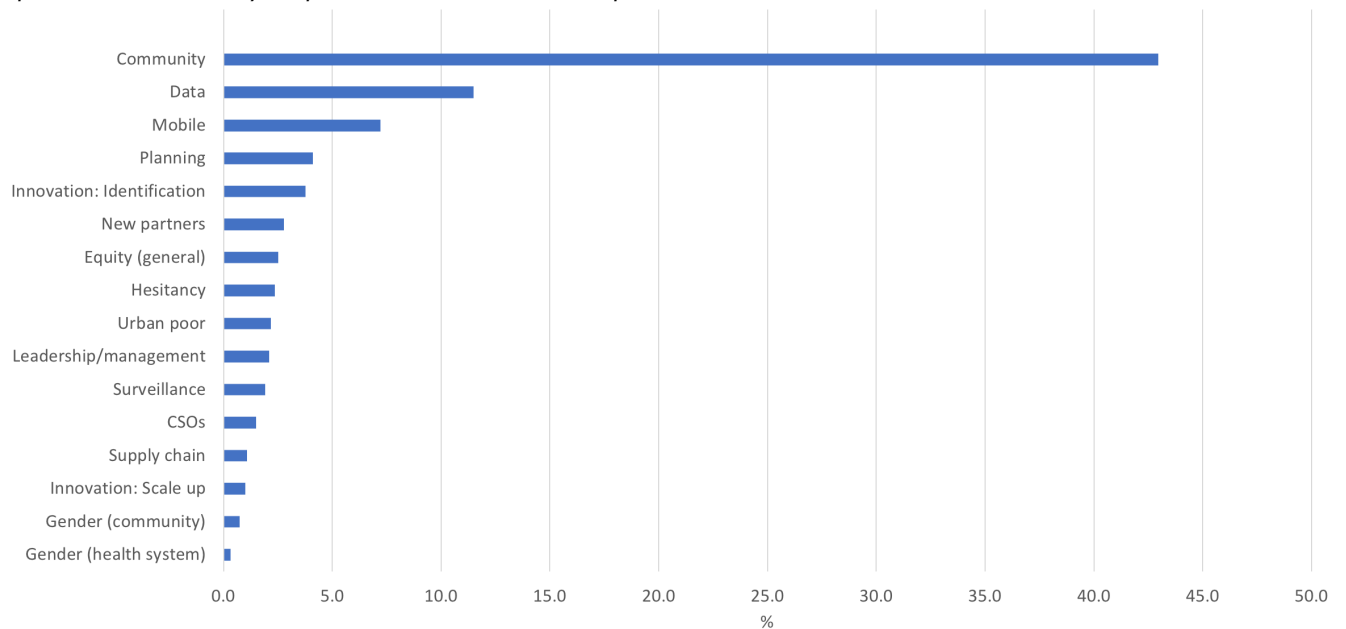
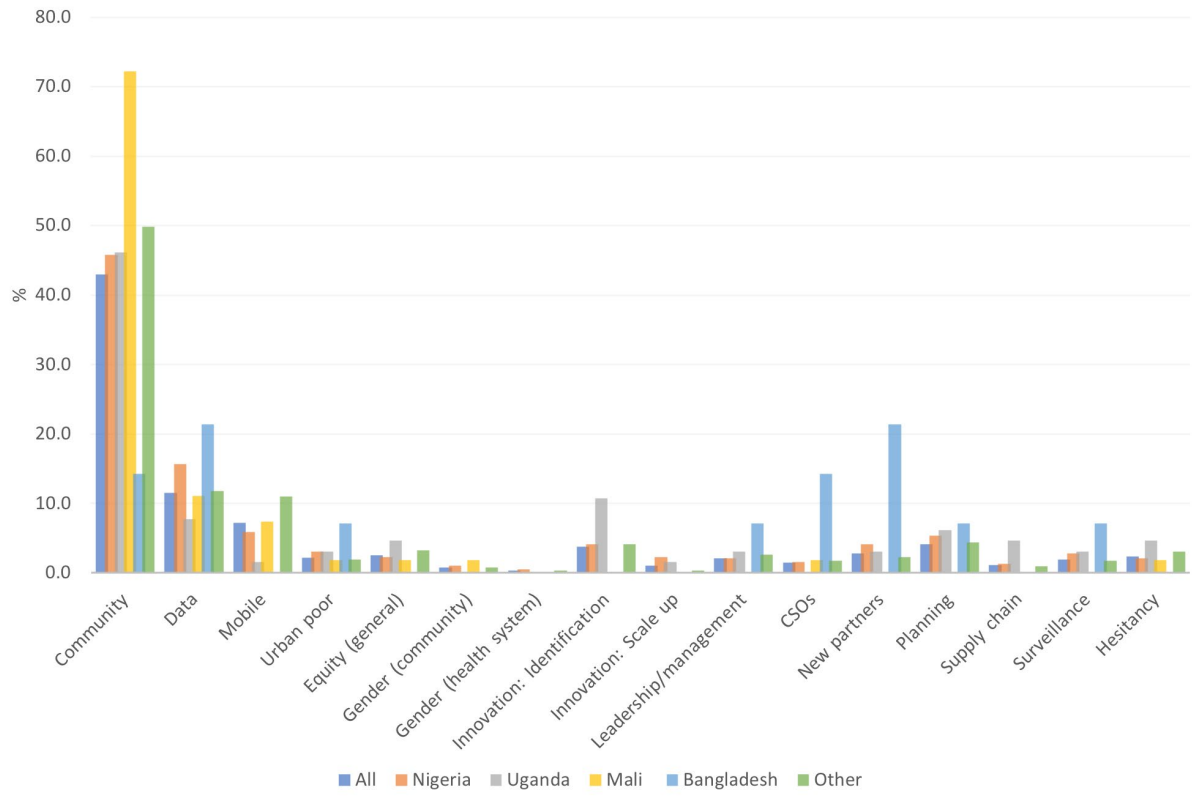


Figure 15: Most important topic that respondents were interested in learning about from colleagues (percent of all survey respondents in each country), broken down by country.



ANNEX 4: ANALYSIS OF RESPONSES TO POST-EVENT QUESTIONNAIRE (ZDLH-X2 ONLY)

CHARACTERISTICS OF PARTICIPANTS

Figure 1: Location of respondents to post-event survey (n=678). Respondents were drawn from at least 48 different countries.

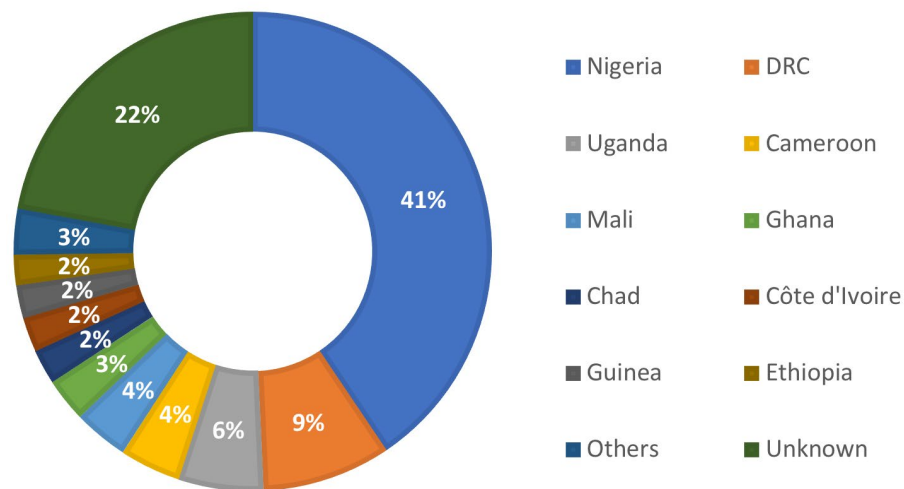


Figure 2: Level of the health system at which respondents work (n=678).

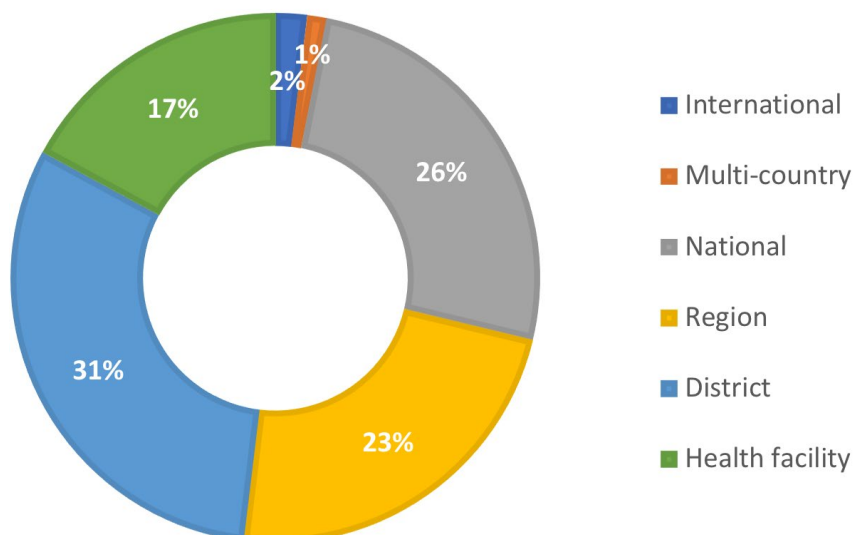


Figure 3: Perceived impacts on five aspects of personal and professional development, broken down by target country.

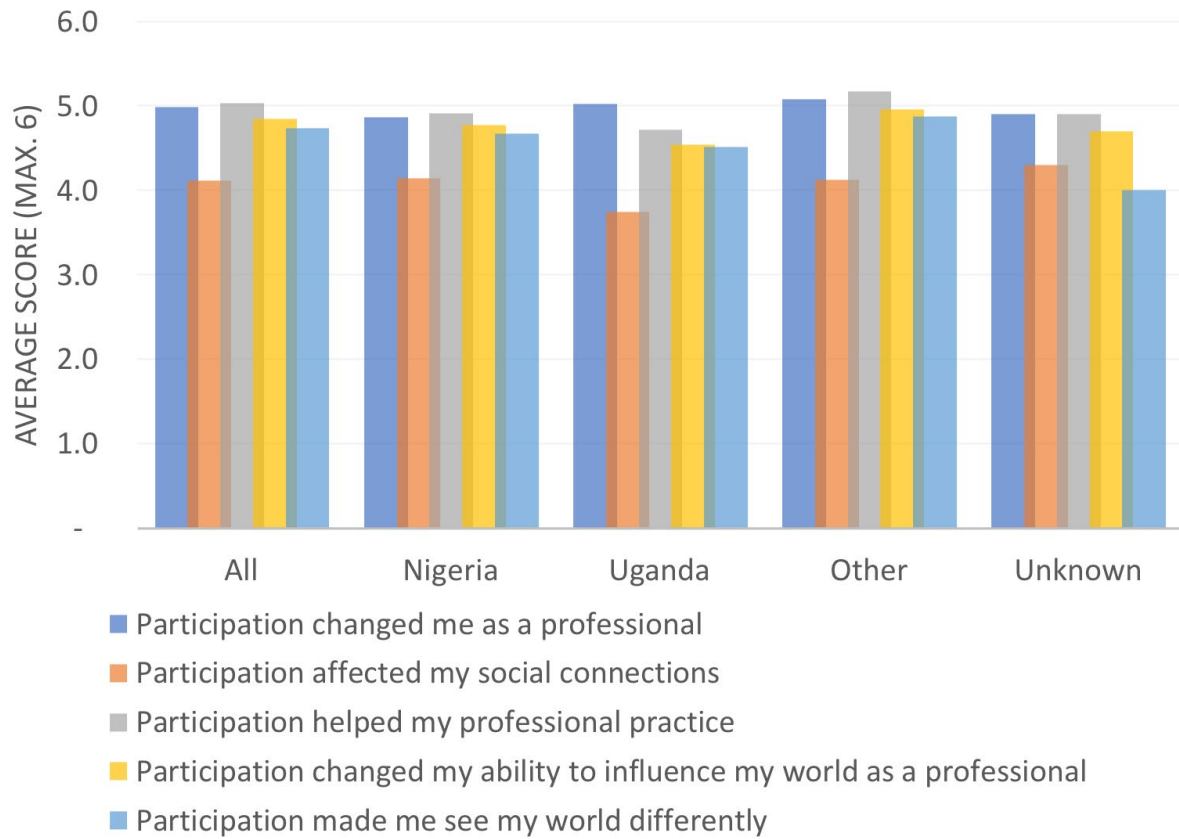


Figure 4: Perceived impacts on five aspects of personal and professional development, broken down by target district.

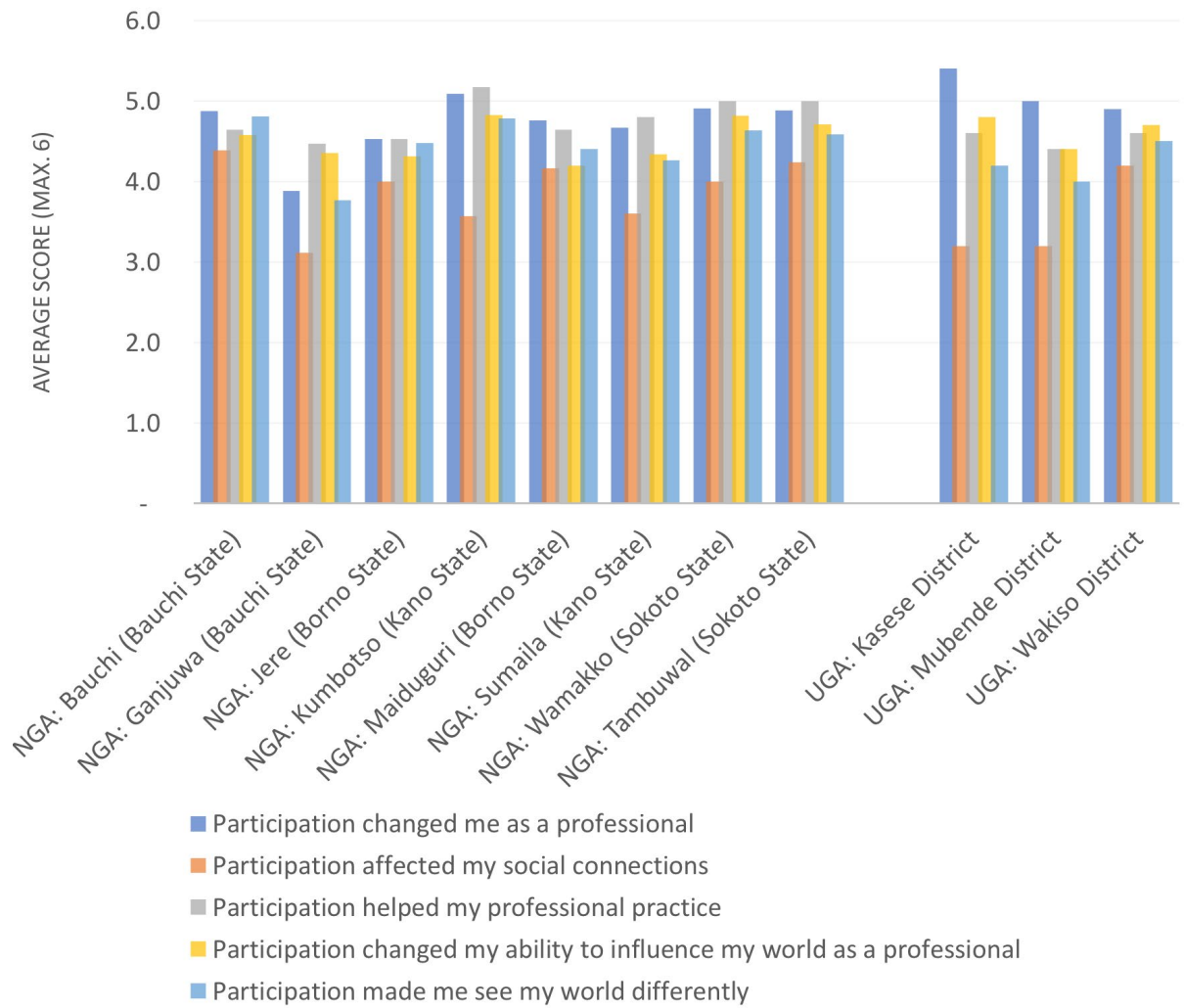
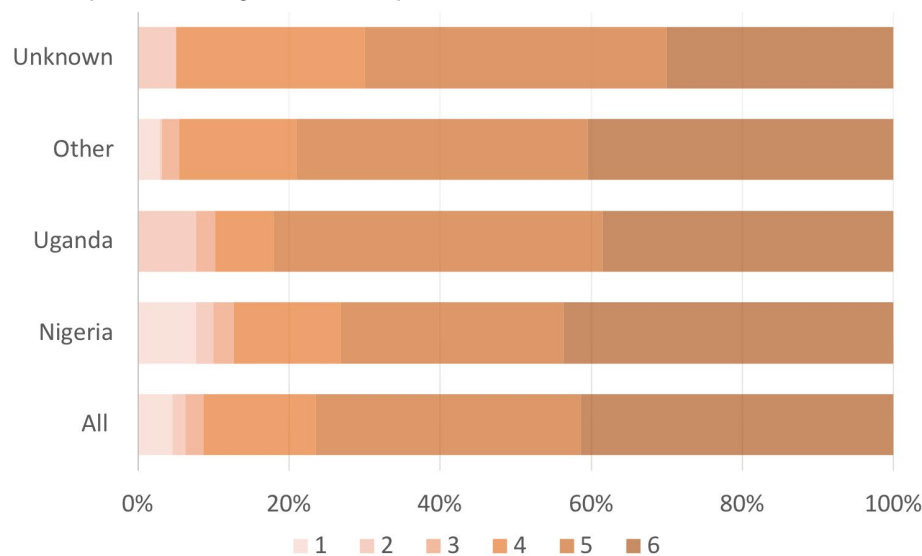
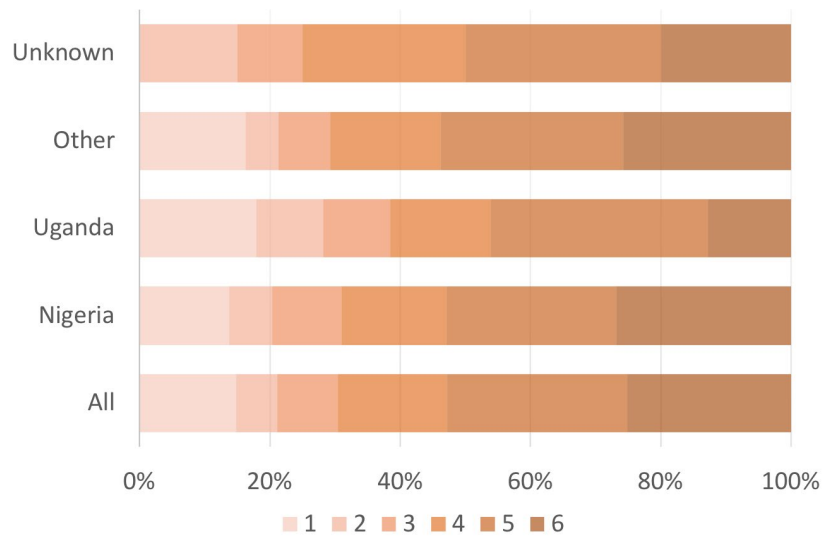


Figure 5: Distribution of scores (1–6) for perceived impacts on five aspects of personal and professional development, broken down by country.

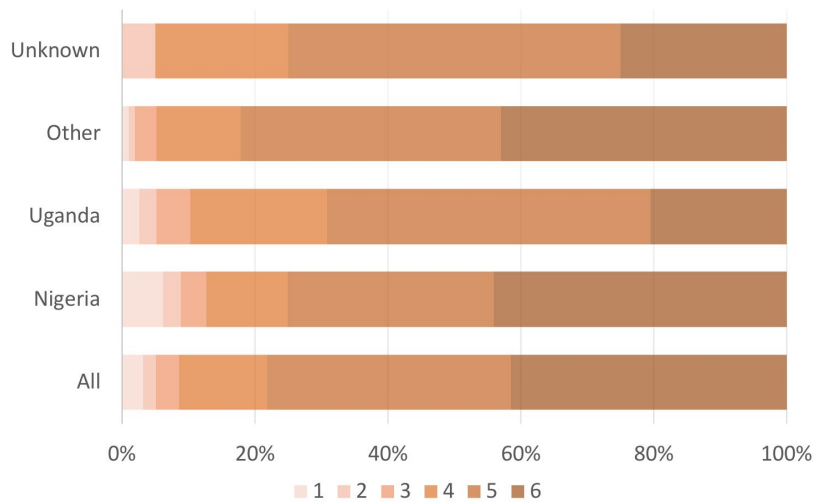
“Participation changed me as a professional”



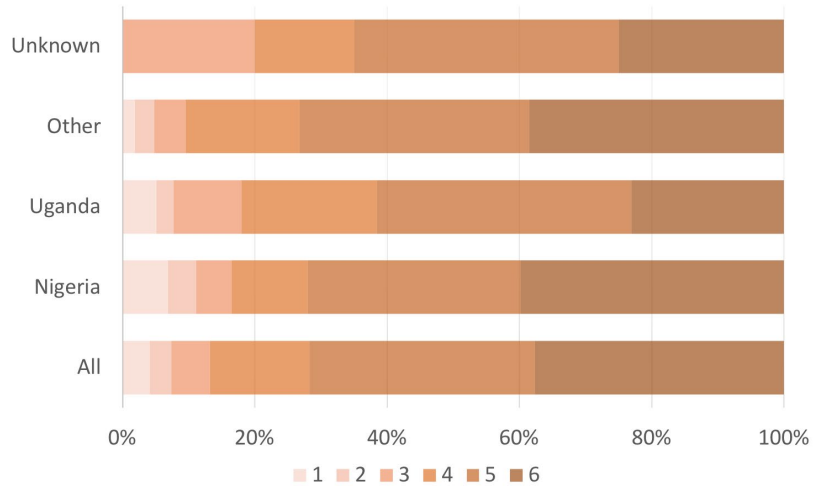
"Participation affected my social connections"



"Participation helped my professional practice"



"Participation changed my ability to influence my world as a professional"



"Participation made me see my world differently"

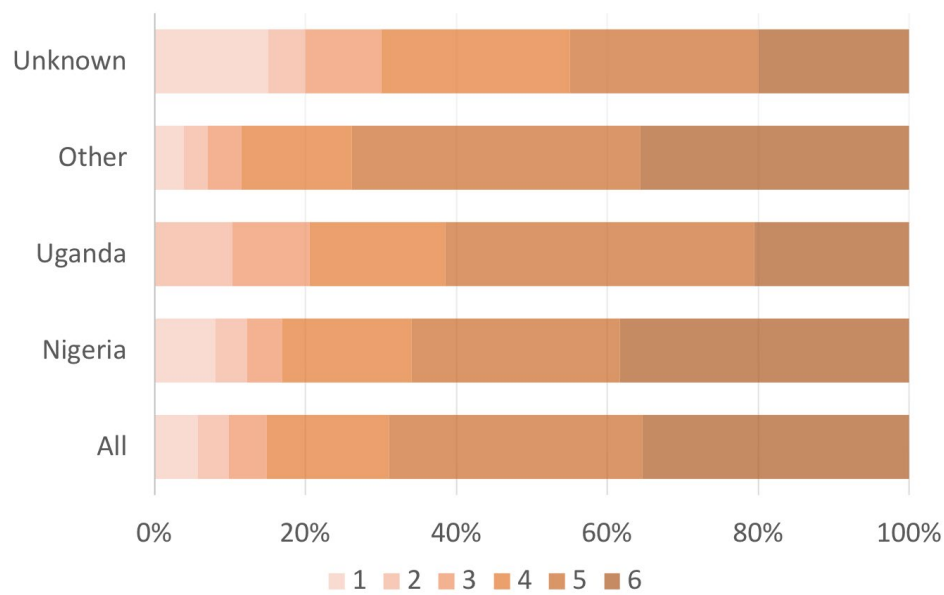


Figure 6: Average scores for perceived impacts on four aspects of personal and professional development, X2 respondents compared to X2 and X1 attendees.

