

Perceptions about Change in Oral Polio Vaccine (OPV) Use and Introduction of Novel OPV

Findings from a qualitative assessment of stakeholder perceptions in Kano and Akure, Nigeria; Lubumbashi, DRC; and Nairobi/Kamukunji, Kenya

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STUDY OVERVIEW

Purpose and scope of assessment

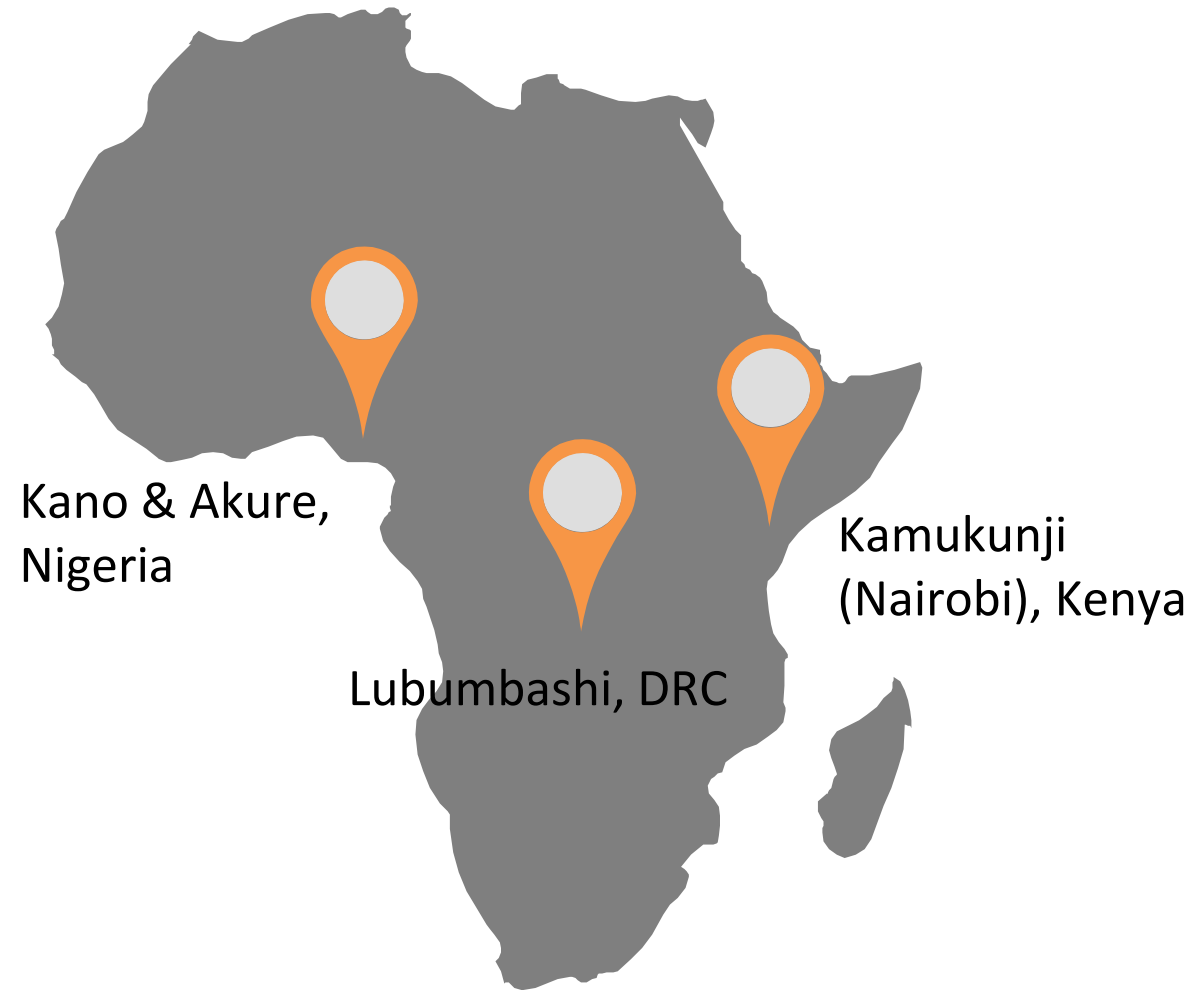
- Undertake a rapid qualitative assessment of perceptions and attitudes on proposed changes to OPV2 for use in outbreak settings to inform communications strategy
 - **Introduction of nOPV2:** New novel polio vaccine contains a genetically-modified attenuated virus, designed to be more stable with less risk of VDPV. It is still under development with application for potential use under WHO's Emergency Use Listing.

Key Objectives

1. Understand the perceptions of polio frontline workers, caregivers, health practitioners and health communications influencers regarding the proposed changes
2. Explore how these perceptions may influence the credibility of the Polio Programme and willingness to use vaccines in outbreak response
3. Examine the ability of frontline workers to address and resolve community concerns regarding these changes
4. Identify key concerns, barriers, and information needs among stakeholders
5. Propose additional measures or elements for communications responsive to community concerns about the proposed changes

Methodology and Sample

- Rapid qualitative research using focus group discussions (FGs) and individual interviews (IDIs) with key stakeholders
 - Caregivers (CG, n=136)
 - Frontline workers (FLW, n=100)
 - Health practitioners (HP, n=32)
 - Social influencers (SIs, n=22)
 - Individuals that influence social norms regarding vaccination; e.g., health journalists, community and religious leaders



Methodology and Sample

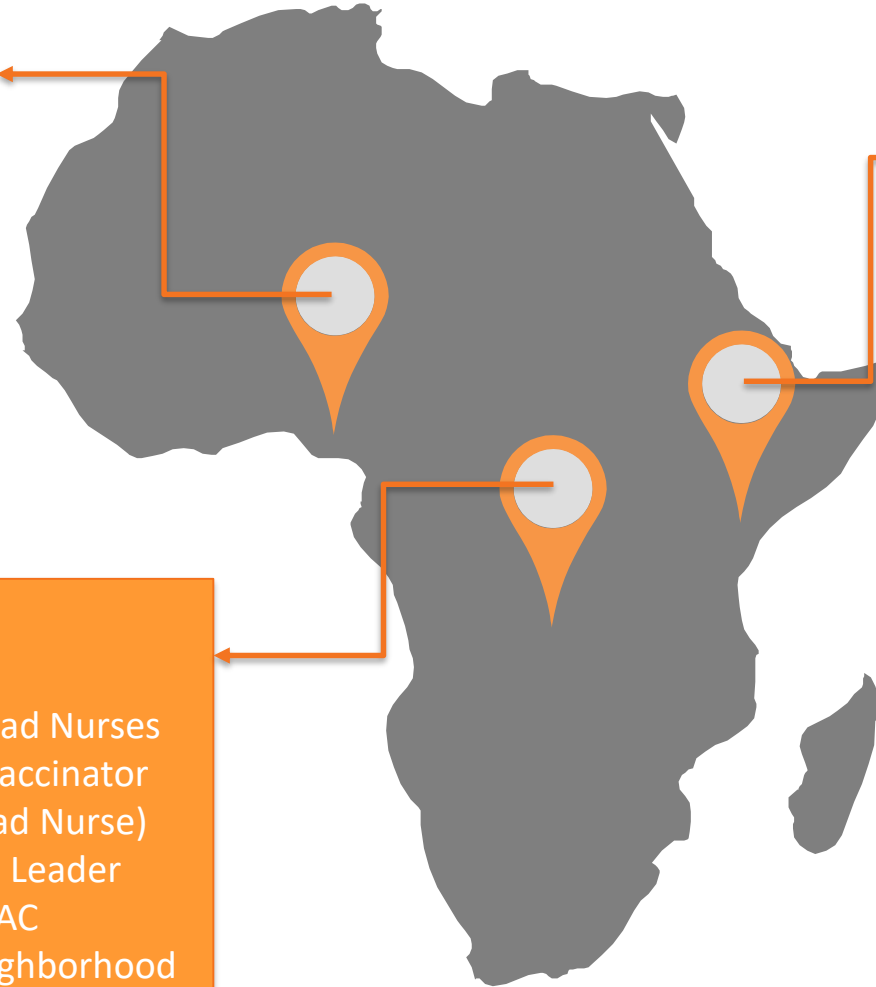
Akure & Kano, Nigeria

Caregivers: 36 women, 41 men

FLWs: In Kano (north), 20 volunteer community mobilizers (VCMs); in Akure (south), 16 vaccinators and supervisors

HPs: 27, including pediatricians, zonal technical officer, state immunization officer, etc.

SIs: 8 health journalists working in radio, television, and print media



Kamukunji, Kenya

Caregivers: 17 women, 16 men

FLWs: 5 MCH nurses, 13 nurses, 9 community health volunteers (CHVs), 2 laboratory techs, 2 public health officers, 1 sub-county surveillance coordinator

HPs: 1 each of facility in-charge, HP sub-county depot manager, clinical officer

SIs: 1 community resource person, community elder, madrassa teacher, imam, chief, journalist

Lubumbashi, DRC

Caregivers: 22 women, 8 men

FLWs: 27 Community Relays (RECOs) + 4 ITs (Head Nurses who assist campaigns when short-staffed) + 1 vaccinator

HPs: 1 MCZ (Head of Health Zone) and 1 IT (Head Nurse)

SIs: 1 Midwife, 1 Traditional Healer, 1 Religious Leader (Postolo; Resistant Sect) & CODESA member, 1 AC (Community Mobilizer), 1 Trad Chief asst, 1 Neighborhood Chief (female), 2 Journalists (Urban & Rural)

LIMITATIONS

- Research was conducted just prior to COVID-19, which may have altered people's perceptions since the study was completed
- Relatively small samples, though within range of evidence-based recommendations for qualitative research^{1,2}
 - Geographic reach limits generalizability across all countries where changes may be implemented, though diversity was sought within sites:
 - Lubumbashi (DRC) included 2 urban and 2 peri-urban/rural settings
 - Kamukunji (Kenya) included Somali, Ethiopian, and Eastern Kenyan migrants
 - In Nigeria, rural and urban sites in Akure in the south and Kano in the north
- Different data collection teams, slightly different guides/process in 3 sites
 - CGs not asked about VDPV (Kenya, Nigeria); GM or EUL (Kenya and DRC)
 - FLWs not asked about GM or EUL (Kenya and DRC)
 - Fewer HPs and journalists in Kenya and DRC; more community-based SIs
- Rapid approach included real-time transcription/debriefing/synthesis to capture main points; additional detail may be available in audio files

1. Guest G, Bunce A, Johnson L. How many interviews are enough? an experiment with data saturation and variability. *Field Methods*. 2006;18:59-82.

2. Guest, G., Namey, E., McKenna, K. How many focus groups are enough? Building an Evidence Base for Non-Probability Sample Sizes. *Field Methods*. 29(1), 3-22. 2017.

Areas of Inquiry



Polio vaccination



VDPV



nOPV2



One-drop strategy



Trusted information sources

FINDINGS

Unless otherwise noted, findings are reflective of cross-site synthesis.

Areas of Inquiry



Polio vaccination



VDPV



nOPV2



One-drop strategy



Trusted information sources

Polio vaccination – Areas of Inquiry

- CGs**
 - What are your thoughts on the polio vaccine?
 - (No specification of IPV/OPV)
 - What benefits do you associate with the polio vaccine?
 - What concerns do you have with the polio vaccine?
- Others**
 - Describe your thoughts on the polio vaccine.
 - What are the benefits of the polio vaccine?
 - What, if any, are your concerns about the polio vaccine?
 - What activities have you been involved in related to polio vaccination/treatment/reporting?

- **General awareness of the vaccine as beneficial and preventive of debilitating disease**
 - In Nigeria, men framed benefits of OPV as lowering risk of needing to pay for healthcare later
 - Some in DRC conflated with treatment
 - Some CGs originating from rural areas in Kenya without personal experience expressed skepticism

- *"Polio is a disease that weakens the legs of children due to a lack of vaccine" (DRC)*
- *"In my own view, we cannot tame the virus when it happens to a child, but we can protect and prevent the children from getting affected by this virus. That is the reason in Yoruba "koju ma ri ibi, gbogbo ara logun e" (prevention is better than cure)." (Nigeria - Akure)*
- *"Polio cannot be treated, one can only waste his resources, may be visiting local herbalist or going to hospital in vain once the child is affected." (Nigeria)*
- *"We used to be in the rural areas, we never used to give polio vaccine to our children and they never got any illness such as that of the poliovirus, they were okay - we used to demand on local remedies. Now in towns when you give the child the vaccine the child will no longer be happy and in turn becomes sick, I don't believe polio [vaccine] is effective." (Kenya)*

- Many CGs in DRC and Kenya expressed campaign 'fatigue'
 - Fears of over-vaccination
- Strong association of OPV with side effects (fever & measles-like rash)
 - Some 'hide' their children during campaigns
 - Cost of treating potential side effects deters men from accepting (DRC)
- Common rumor in Kenya & DRC that vaccines, including OPV, are aimed at population control
- Low awareness & info gaps lead to hesitancy
 - Lack of epidemiologic understanding
 - Lack of confidence in FLWs (Kenya)
- *“Why do we say the vaccine has worked when, after 2 weeks we vaccinate (again) after 2 weeks we vaccinate, after a little time we vaccinate...” (DRC)*
- *“Because we once vaccinated my 1 year old, and right after he had a high fever and measles-like rashes appeared on his body. He was hospitalized for two weeks and it was a great misunderstanding with my husband who threatened me because I vaccinated the child in his absence.” (DRC)*
- *“There is mistrust among the community members, there are beliefs that the vaccine is a family planning measure to reduce the Somali Population.” (Kenya)*
- *“Mothers believe that sometimes certain people who don't have the know-how might make themselves doctors and vaccinate their children hence endangering their lives.” (Kenya)*

- **FLWs find OPV effective and important for prevention**
 - OPV easy to administer, but cold chain important to maintain
- Report that campaign fatigue and side effects diminish OPV CG acceptability (DRC & Kenya)
- Other challenges:
 - ReCos lack information (DRC)
 - Mistrust of FLWs/HPs by some religious sects (Kenya & DRC)
 - Mistrust among Somali migrants whose children received routine immunizations abroad/have private doctors (Kenya)
- Sufficient lead-time required to generate awareness/increase acceptability

- *“One thing I know is that this OPV is very effective because if it is not effective, at least we should have seen one person in [local community] that has polio, but we can’t record any of that.” (Nigeria)*
- *“In the facilities [IPV] is very well accepted. In the campaigns and villages [OPV] is 50/50 accepted...In the facility the routine one is more acceptable than the campaign one. Mothers say we are overdoing the campaign polio.” (Kenya)*
- *“The fact of coming back several times with the vaccine against polio causes suspicions with the community she thinks that the vaccine that one gives is not effective.” (DRC)*
- *“There is always resistance to vaccination especially in certain religious sects and if we do not vaccinate all children there are always strains that arise.” (DRC)*
- *“...There is a group that come from Canada, America sees that their children have been vaccinated there so they see there is no need to be vaccinated.” (Kenya)*

- **HPs consider OPV safe and effective**
- Community-based SIs generally recognize the preventive value of OPV
- SIs acknowledge OPV resistance issues: family planning myth, diaspora distrust, 'poison' to exterminate population (DRC & Kenya)
- A few HPs/SIs unsure of FLW delivery in terms of hygiene and reach (DRC & Kenya)
 - Concern around hygienic delivery of OPV
 - Unpaid CHVs less motivated to reach all of the high-rise dwellers (Kenya)
 - Rural, hard-to-reach areas (DRC)
- *“We should continue using oral polio vaccine because it brings us improvement in the health of children...It gives a massive reduction of polio victims. ... So, it is something that I can say is safe and effective.” (Nigeria)*
- *“The safety of the vaccine from the door to door vaccination we are doing is purely dependent on the hygiene of the person issuing the vaccine. Children were getting diarrhea (from FLW-administered OPV), and affecting acceptability in the community.” (HP- Kenya)*
- *“They can't reach everybody because of how the buildings are (high-rises) - many people and no lift to go all floors. CHVs are volunteers, not paid, so we can't expect them to reach all.” (Community resource person – Kenya)*
- *“My big concern is how to put an end to all these rumors circulating about the polio vaccine - some call it poison.” (HP – DRC)*

Areas of Inquiry



Polio vaccination



VDPV



nOPV2



One-drop strategy



Trusted information sources

VDPV – Areas of Inquiry

- CGs**
- What do you know about recent polio outbreaks here/in Africa?
 - What do you think/have you heard is the cause of those outbreaks?

- Others**
- Are you familiar with vaccine-derived poliovirus?
 - What do you know about it?
 - What are your thoughts or concerns about VDPV locally?

Note: Questions about VDPV were not asked in Nigeria

- **Caregivers were unaware of VDPV***
 - In Kenya, some caregivers attributed recent polio outbreaks to inconsistent immunization due to political instability (in Somalia)
 - In DRC, few caregivers were aware of recent outbreaks, which they attributed to poor living conditions
- *“I can say it’s because generally all diseases are prone to war zone areas, and since there is instability in Somalia, you will find a lot of them. And when it comes to the Northern Kenya – it borders Somalia – the people on the other side are just the same people, and when it affects the people on the border side, it will eventually spread to Kenya.” (Kenya)*
 - *“The cause, I believe, is due to poor living conditions. Because of financial difficulties, the children are exposed to different diseases.” (DRC)*

*VDPV was asked about indirectly in Kenya by having CGs describe any recent outbreaks of polio they had heard about and what they understood to be the cause.

- Most FLWs in DRC were unfamiliar with the term VDPV
- 3 of 4 groups in Kenya were familiar with VDPV but attributed it to improper vaccine handling
- About half of FLWs had heard of recent polio outbreaks and attributed them to:
 - Social resistance (rural areas/religious groups)
 - In-migration, low immunization coverage in originating areas (e.g., Somalia)
 - Viral resistance
 - Improper vaccine storage
 - Vaccine disposed in the environment (mutation)
- *“The vaccine is safe when kept under a particular temperature, but now when it is exposed to the environment it becomes dangerous.” (Kenya)*
- *“Possibly people coming from other provinces who are not vaccinated – they can contaminate others.” (DRC)*
- *“[I have] never witnessed, but heard some health practitioners pour out vaccines, and when children play they are able to swallow this vaccine, and since it is live attenuated they can get it through this ‘disposal issue’.” (Kenya)*
- *“Instability means you cannot vaccinate the population.” (Kenya)*

- **Generally low awareness of VDPV**
- HPs in Kenya claimed awareness of VDPV; however, 2 of 3 mischaracterized it
- One HP in DRC knew of VDPV but attributed it to poor cold chain storage
- A journalist in Kenya wrote about the Eastleigh environmental samples of VDPV; other influencers were not asked
- Some social influencers in DRC (journalists, community leaders) had heard of isolated cases but were largely unaware of VDPV
- *“Yes, I know what that is. The vaccine is an attenuated virus. Thus, the vaccine-derived virus can be contracted if storage of the vaccine or vial is not returned [and left to contaminate]. Hence, the campaign principle of ‘given bottle, finished bottle, returned bottle’.” (HP, DRC)*
- *“[VDPV] can happen if we give vaccines that are expired, or if you use a vaccine that won't benefit the child. If kept at the wrong temperature, then it can give the polio we want to prevent.” (HP - Kenya)*
- *“There is a ‘so what’ aspect from the community that if the virus was found out in the sewer system, so what? I had to explain that when un-vaccinated children got into contact with the virus then it will lead to an outbreak.” (Journalist, Kenya)*

Areas of Inquiry



Polio vaccination



VDPV



nOPV2



One-drop strategy



Trusted information sources

nOPV2 – Areas of Inquiry

CGs

- What do you think of this idea of a new vaccine?
- Would you vaccinate your child with it?
- How does your community typically respond to something new?
- What are the top 3 questions you anticipate from other caregivers?

Others

- What do you personally think of this idea of a new vaccine?
- What kind of challenges might you expect?
- How do you think the general public would react?
- Questions about GM and EUL

- CGs expressed, and expect from their community, initial hesitancy/skepticism
 - Why another campaign?
 - Why a new vaccine?
 - Was the old one not effective?
 - Will the new one be effective?
 - What are the side effects?
- **CGs will likely accept nOPV2 if explained well and their questions are answered**
- CGs will expect *information* from HPs and FLWs, and *endorsement* from traditional and religious leaders and their own social networks
- *“Even a new husband is not trusted right away. It will take time to get to know and accept him.” (DRC)*
- *“I want to know the reason why we want to change from the existing vaccine we are using.” (Nigeria – Kano)*
- *“If the new vaccine also has side effects it will further reinforce the reluctance of some parents, and people will not accept that their children are vaccinated with the new vaccine.” (DRC)*
- *“[CGs] can only trust the new vaccine if they see it tested with other children, if it is advertised through the media, if only they watch from the TV, if only someone they know gives them in-depth explanation.” (Kenya)*

Common areas of further question/concern*:

- Where has this been tested? Who has approved it? Are we “guinea pigs”?
- What are the ingredients in the drug? Have things been added?
 - Is it to limit fertility/reduce population?
 - Is there any alcohol in it? (Muslim prohibition)
 - Bringing coronavirus? (1 person, Kenya)
- Why so many campaigns?
 - Is this different than routine immunization?
 - Will this eradicate polio?
- Will this vaccine be used worldwide or targeted at “us”?

- *“I know the government and United Nations won’t like to poison us, it is okay.” (Nigeria – Akure)*
- *“It is said that the polio vaccines that we give to our children are already turned into poison from the manufacturing plant to exterminate the Congolese because it is estimated that we Congolese have become very numerous.” (DRC)*
- *“Was the vaccine tested before? If yes, who approved, which government allowed their people tested with new vaccine? We need assurance so that we can allow ours to have it.” (Kenya CG)*
- *“If it's a foreign thing, people will think it's laced with something...CGs will think it is for family planning by the government to start infertility... or bringing a new virus to us, coronavirus.” (Kenya FLW)*
- *“I always wonder why, despite multiple polio vaccination campaigns, does it not end?” (DRC)*

- **FLWs are open to the introduction of nOPV2 as long as it is proven safe and has been well tested**
 - Due to campaign fatigue and low awareness, FLWs anticipate initial community resistance but feel competent to overcome
 - Will need comprehensive training* on the new vaccine; reasons for change and administration, to encourage acceptance
 - Mixed views on whether and how to introduce nOPV2 to CGs
 - Say nothing and administer as usual
 - Explain what makes this vaccine different/better
- “[nOPV2] won't be the first new thing that is coming, as long as proven safe and effective it will be well-received.” (Kenya)
 - “...We cannot say that polio is being eradicated in Nigeria now. But if we can get a vaccine that is more effective... our mind will be at peace.” (Nigeria – Kano)
 - “First we need to be trained or briefed on the pros and cons of the new vaccine because there are intellectuals in the community who will ask us questions.” (DRC)
 - “The facilities have been interchanging and using different types of vaccine. I have heard of the bOPV, tOPV... we don't inform the mothers of the type of vaccine because it is more technical. They won't understand.” (Kenya)
 - “[We must] give necessary information on the new vaccine to avoid speculation ... that the new vaccine is a poison to exterminate the Congolese because often in such situations rumors arise.” (DRC)

*Specific training requests covered under Information Sources.

- **HPs are supportive of nOPV2 as long as it is proven safe and has been well tested.**
 - Would hope a new vaccine would finally eradicate polio
 - HPs echoed concerns that there may be initial resistance in the communities without proper sensitization
 - Primary questions among HPs: safety, effectiveness, side effects
 - HPs asked for more information about the composition of nOPV2, the need for a new vaccine, and whether there were concerns with the existing vaccine
 - HPs need to be empowered to disseminate accurate information down the chain of command to FLWs
- *“I would support its introduction. It is good if research showed that it will reduce the virus.” (HP - Kenya)*
 - *“If we raise awareness beforehand through the media, with CACs and ReCos, they will understand but there will be no shortage of questions.” (HP – DRC)*
 - *“We want to know its effectiveness and why it’s going to be used.” (HP – Nigeria, Kano)*
 - *“To adopt the new vaccine, we need explanations. Let us also be told what the benefits of this vaccine are to popularize them by mutual agreement with members of the community.” (HP-DRC)*

- **Influencers have many questions on behalf of their communities, but would generally support if safe and effective**
 - Similar questions to CGs and FLWs about why a new vaccine, what was wrong with the old one, whether there are side effects
 - Religious leaders play a strong role and can either encourage or discourage uptake
 - Underscores importance of convincing resistant sects
 - Populations in rural (vs. urban) areas tend to exhibit lower levels of awareness, likely due to limited reach
- **Mixed opinions on how to communicate about nOPV2 to caregivers**
 - May be challenging to control messaging of social media influencers, including bloggers and vloggers (Nigeria)
- *“For me, I think it is not wise to tell them we have a new vaccine, just tell them it is a OPV that is normal because if you tell them that this is new, we have added something, suspicion will be raised.” (Elder – Kenya)*
- *“Especially with the Kishila religious sect, one must think a lot about what measures are used to convince them. These measures will have to come from above, that is from our leaders at the highest level, to allow us to apply them.” (DRC)*
- *“Some report breaking news before the news is complete, while others wait to get complete news before reporting it.” (Journalist, Nigeria)*

- **Kenya & DRC** - EUL not a problem for HPs
 - Seen simply as WHO-backed response to 'urgent need'
- Social influencers had more concerns
 - Guinea pigs for testing a new vaccine (Kenya)
 - Worry that this is being rushed through (Kenya)
 - Sensitization needed to avoid rumors/speculation in the community (e.g., using expired vaccines) (DRC)
- **Nigeria** - More hesitancy about EUL from HPs
 - Convince the health professionals first
 - Ensure not exploiting children for testing
- Journalists expressed some concern
 - Social and new media portrayal of EUL
- *“These emergency vaccines developed in a short time and brought to the affected area, we can see them as beneficial to that situation.” (HP, Kenya)*
- *“Why will it take like 10 years to manufacture a vaccine and then this one takes a minimum time? What is the difference when this one takes less time? Will this be effective as the previous?” (SI, Kenya)*
- *“It depends on the presentation, if those people introducing it are convincing that this thing is okay... But it is not just doctors alone, ...the health workers are important to convince. If they are not convinced, they will be the people that will confuse others about it.” (HP, Nigeria)*
- *“[The community] will be happy to know that we have also planned a few things for difficult times but there remains the responsibility to inform well about everything concerning the new vaccine, and that they issue guarantees that they will not be expired vaccine.” (SI, DRC)*

Areas of Inquiry



Polio vaccination



VDPV



nOPV2



One-drop strategy



Trusted information sources

Trusted information sources – Areas of Inquiry

- CGs**
 - From where/whom have you received information about the polio vaccine?
 - Who would you trust to obtain more information?
 - Who else influences your thinking about polio vaccination (i.e., family, friends, traditional and/or religious leaders)?
- Others**
 - From where/whom have you received polio vaccine information?
 - If there were to be changes to the polio vaccine, what sources would you trust for accurate information about these changes?
 - What information, training, or support would you need to confidently communicate changes to vaccine strategy? (FLWs/HPs)

- INGOs, government (MOH), healthcare practitioners (all levels)
 - Media [local/int'l (BBC Somali) radio & TV]
 - Community health workers (RECOs in DRC, VCMs in Nigeria, and CHVs in Kenya)
 - Civic (chiefs, elders) and religious leaders (pastors, imams)
 - Informal sources (peers, marketplace) (Nigeria)
 - **CG trust information from INGOs, MOH, media, health centers, HPs, FLWs**
 - FLWs less trusted in Kenya
 - **CG confidence depends on information from those above AND endorsement from traditional, civic, and religious leaders**
- *“Of all people we trust nurses and ReCos because they are often trained on polio and the vaccine.” (DRC)*
 - *“We think TV and radio are the most accurate source of information because of the reach: anything advertised by the government this way is accurate because it's going to reach more people (i.e., not just Somalis).” (Kenya)*
 - *“[We trust] polio teams (the VCMs and the health worker), because they are the ones that usually come to our home to vaccinate our children.” (Nigeria - Kano)*
 - *“These [community health volunteers] can't be trusted, no one will take vaccine from anyone roaming around carrying a bag you don't know what it contains. The vaccine should be given to the health facilities where a doctor is there who knows and gives prescriptions.” (Kenya)*

- **Strong adherence to chain of command**
 - Tend to trust info from immediate supervisor (head nurse) and/or head of local health administration unit
 - In rural Nigeria, FLWs also depended on radio and social media for info
- Expect information to cascade down from top (MOH > lowest administrative unit)
 - “Back-up” support from media and WHO would be helpful and make their jobs easier (Kenya)
- *The MCZ (head of health zone), because they receive the information first and transmit it to others.” (DRC)*
- *“WHO info needs to be domesticated and flow from national down to communities through appropriate channels; so from county level and national level and sub-county we also include the media so they know what we should be saying about this.” (Kenya)*
- *“You have rightly talked about health centres because if there is going to be any change to the vaccine, those places are where you get the information and be rest assured that any information gotten from this source is correct.” (Nigeria)*
- *“If [caregivers] get information from the facility and the news is talking about the same, it will be effective - we are not hiding anything, the messages should match.” Kenya*

- Proper training on administration
- Comprehensive briefing on:
 - Reasons for change, vaccine composition, safety & effectiveness (including testing), stability/handling, pros/cons, side effects/SAEs (and treatment)
- Better recruitment/training/incentivization
- Provision of:
 - Arguments/reasons to respond to and convince CGs (esp. why another campaign)
 - Sensitization tools (leaflets, posters, flyers, pamphlets)
 - Vaccine management tools, improved droppers
 - Visibility/legitimacy: vests, shirts, aprons, badges, signs
 - Transportation and weather protection
- Need more vaccination teams, time to vaccinate/longer campaigns, remuneration
- *“Training the health workers and volunteers so that they don’t give conflicting information.” (Kenya)*
- *“We need stronger arguments so the population understands” (DRC)*
- *“We need our capacity built on what the vaccine entails so that we can be able to fully explain to caregivers.” (Nigeria)*
- *“[We need] the backpack to be identified even from a distance in order to reach children who missed the vaccine and to be safe because there is risk of being mistaken for a thief.” (DRC)*
- *“With adequate information, I am comfortable.” (Kenya)*

- HPs adhere to chain of command from national (MoH) level on down
 - Expect communications to follow protocol from the top
 - Expect all sources to have the same information/message
- Social influencers (community leaders and journalists) noted public health 'briefings' typically led by INGOs and the MoH
 - Journalists expect information from WHO, UNICEF, GAVI, GPEI, EPI, journals, etc.
- Influencers' sources varied, with local leaders, medical staff and community health workers prominent
- *“When there is a new vaccine or a new molecule we receive a circular note from the General Secretariat of Health that is shared with the health areas. There is a dialogue between the government and the partners on whether to give a message, produce the brochures or the information packages. The DPS often comes to accompany us at the level of the health zone.” (HP, DRC)*
- *“Every source that will give information must give accurate and correct information. So, from the word go, we must strategically invade all the information media. So, it’s not that WHO releases this, but somebody misinterprets it on Twitter [or Facebook].” (HP, Nigeria)*
- *“When the journalist misinforms, it's over.” (SI, DRC)*
- *“We will report best on facts and information given to us by WHO and UNICEF and also on the finding from the field.” (Journalist, Nigeria)*