

# Polio: Post-Campaign Communication Assessment in Banadir Region, Somalia

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## Abstract

Polio campaigns are routinely conducted in Somalia and the ministry of health engages radios, TVs, mounted car announcements, and community mobilizers.

**Purpose:** The assignment was initiated in order to assess the effectiveness of polio mass media campaigns with respect to outreach to targeted audiences and understanding of the messages of the various media, channels, and contents.

**Design/methodology:** A quantitative method has been used for the data collection; The study heavily relies on primary data collection from the field. Visited houses were randomly selected in targeted districts.

**Findings** The findings of this study indicate that, 7 out of 10 people surveyed cited that mass media as their source of information about polio campaigns. Also the study found Misconceptions, misinformation, fear as well as intricate tribal and cultural norms are

challenges facing polio campaign in Benadir region.

**Research limitations/implications.** This study only emphasized Benadir region polio campaign; thus, the findings of the present study may not be applicable to other countries.

**Originality/value:** Limited studies have been conducted to investigate the impact of Polio post-campaign communication in Benadir region Somalia.

**Keywords:** Polio, Post-Campaign, assessment, Benadir, Somalia.

## Introduction

Benadir is among the 18 regions of Somalia, it is the largest region with 17 districts and shares boundaries with lower Shabelle and middle Shabelle, it has an estimated population of 3 Million. Benadir's population of children under the age of five is estimated 20% of the population. Those below one year are also estimated at 4% of the population. According to FMOH (2022), Somalia is

affected by circulating vaccine-derived poliovirus type 2 (cVDPV2), and there have been five reported cases in 2022. Thus, the government and GPEI partners must stop the transmission of vaccine-derived polioviruses (VDPVs), which can cause clinical illness, including acute flaccid paralysis.

Before the campaign starts, MoH launches a mass media campaign to raise awareness of the outbreak, the disease, the vaccine, and informing communities vaccination dates. To raise household awareness as quickly as possible, communication for development unit (C4D) engages radios, TVs, mounted cars announcements, and community mobilizers.

The assignment was initiated in order to assess the polio program's mass media campaigns with respect to outreach to targeted audiences, effectiveness, and understanding of the messages of the various media channels and contents.

## Methodology

The present study applied purposive sampling to determine the impact of pre-campaign communication in Banadir Region, Somalia. This study used 28 items which were divided into six sections to measure the research variables: These variables' items were adapted from UNICEF.

The assessment questionnaire consisted of 28 items that were divided into six sections.

- The first section included six questions that explored the demographic profile of the caregiver.
- The second section, composed of three questions, evaluates the knowledge of participants about awareness, and the source of the most trusted information about campaigns.
- The third sections consist of four questions the examine the vaccination status of polio target children and reasons for missed vaccination.
- The fourth section observed the objective or subjective perception of immediate AEFI (adverse events following immunization).
- The fifth section consists of ten questions and inquires about knowledge of the polio diseases and risk perception about diseases and vaccines.
- The last section carries four questions concerning perception of vaccinators and community mobilizers deployed during campaigns.

The study heavily relies on primary data collection from the field and carrying out a quantitative assessment by identifying the

parents of the children aged 0-5 as primary respondents. In this regard, one round of data collection and analysis were planned and executed to achieve the objectives. During the data collection, SRA enumerators randomly visited selected houses to identify households with under five children that were reached with OPV vaccines and those that were missed during the campaign.

### **Sampling**

As far as the sample size is concerned, 1,200 parents were targeted, with an equal number of male and female respondents totaling 1,200 primary respondents (600 males and 600 females). Every five houses, one was targeted, using systematic random sampling, however, after data collection completed, we received 1,109 responses, including 790 female and 319 male respondents. The study missed 8% of the target respondents due to incomplete data and/or respondents rejected/reluctant to take part the study. This counts 92% response rate.

### **Data Collection**

Data collection commenced a few days after the campaign. Areas were selected for the study on the basis of their risk level for polio. Eight enumerators were assigned to each of

the four districts in the Banadir region. Enumerators were familiar with the geographic area of the study, and they were randomly selected from the community. In each of the selected districts, 300 houses were randomly selected and visited in areas where volunteers had completed vaccination and houses marked as completed by the volunteers.

Electronic questionnaires were designed and uploaded to Android-based smartphones for post-campaign communication assessments. The assessment questionnaire consisted of 28 items, which were divided into six sections. The questions were uploaded for the Open Data Kit (ODK) application. GPS coordinates of each household were recorded as part of the questionnaire. Enumerators received one-day training in the use of mobile phones for the data collection.

The number of enumerators was 32, and there were three technical team, including a data analyzer, a report writer, and a supervisor, for a total of 35. Enumerators were divided into four groups; in each district, eight enumerators were assigned to collect the data. This facilitated the completion of the data collection within three days since four teams are working in parallels in each district.

## Data Analysis

Descriptive statistics have been mainly used for data analysis to observe the frequency distribution, means, and percentages of the target indicators. Results have been presented in the form of charts and tables in the subsequent part of the report. This report presents consolidated findings from all assessment surveys fielded in Yaqshid, Howlwadaag, Waberi, and Wadajir. Total of 1,109 responses have been analyzed.

## Key Findings

In the four districts, 1109 houses were visited by SRA enumerators for post campaign communication assessment. The findings have showed that the main sources of information for mothers and caretakers were local radio and TV stations. The assessment provided opportunities to identify the proportion of parents who miss polio awareness messages and ensure necessary intervention to reach them.

## Demographic Profile

The gender distribution more respondents identified as female than male among the sample population, there were 790 female respondents (71%), whereas male respondents numbered only 319 (29%). According to chart 1, district-wise Waberi

and Yaqshid had more male respondents than Howlwadag and Wadajir

## Type of Settlement

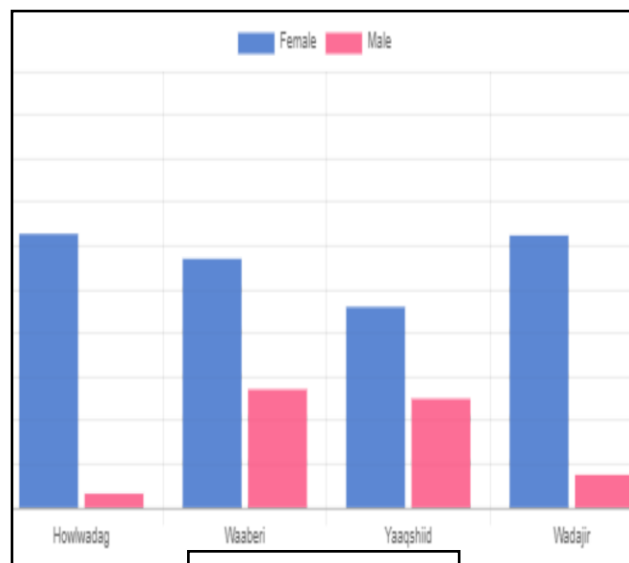


Figure 1: Gender

The demographic profile of the respondent was included in the question related to the type of settlement in which the respondent lives, and the settlement was classified into three categories based on the characteristics of the settlement, namely: - apartment or villa, internally displacement persons' camps, and slum areas. Chart 2. shows that 766 (70%) respondents live in an apartment or villa, followed by slum areas in 193 (17%) and settlements in IDPs 150 (13%). District wise, IDPs' were not targeted in Yaqshid; while Wadajir had the most IDP respondents, Waberi had more slum area respondents than any other district.

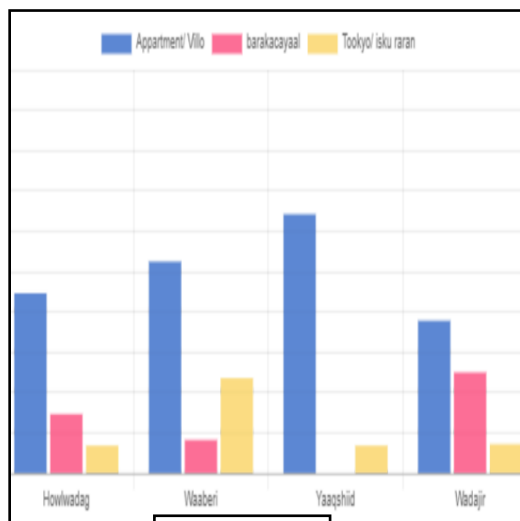


Figure 2:

### Length of stay in this particular community

The study aimed to find out how long do the respondents live in the district, this classifies if they are new comers or people live the area long time. According to figure 3, the study found that most of the respondents reside the area for many years. Those who live many

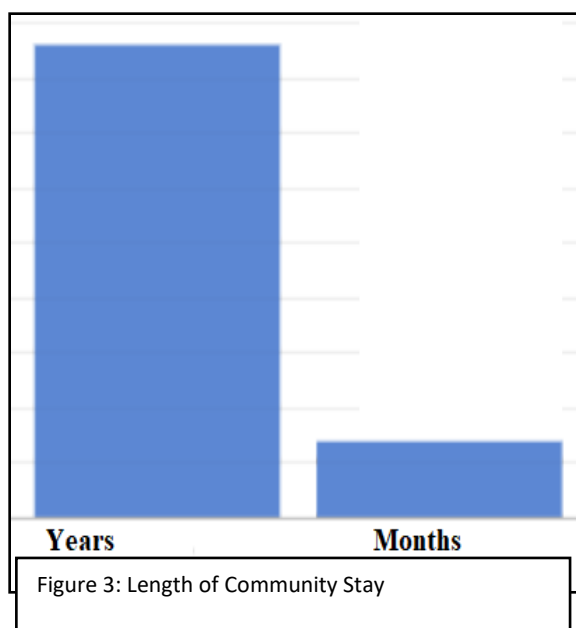


Figure 3: Length of Community Stay

years were the frequency of 956 (86%) while those settled months were the frequency of 153 (14%)

### Literacy Rates Among the Target Respondents

Literacy is one of the most important demographic indicators, and it has been part of the Millennium Development Goals (MDGs) of the United Nations from 2000 to 2015, and now it is one of the salient features of the Sustainable Development Goals (SDGs). Higher literacy rates among the people may play a pivotal role in the success of current polio awareness campaigns launched by UNICEF and help to eradicate the disease.

Respondents were asked whether he/she is illiterate (cannot read and write) or literate (can read and write). It is noteworthy that respondents are considered illiterate if he/she cannot read and write the Somali language, while respondents who never go to school but can read and write have been considered literate. Chart 4 explains in detail over all frequency of literacy,

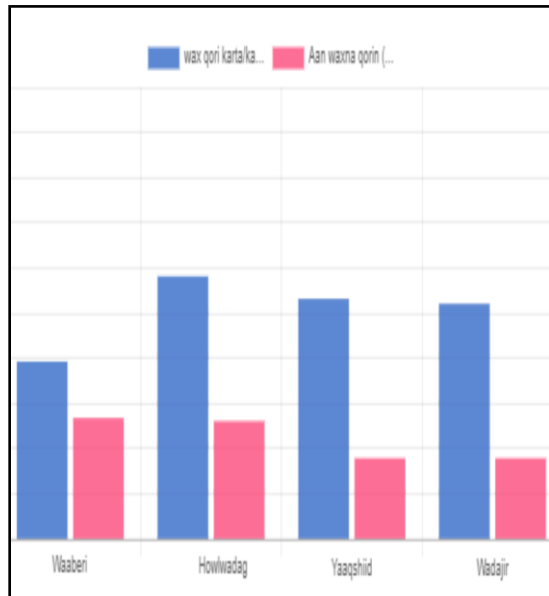


Figure 4: District wise literacy rates of the

The study found 772 (70%) able to read while 337 (30%) unable to read. On the other hand, across the four districts of this

assessment, it is evident from the chart that respondents from Howlwadag got the highest literacy rate, followed by Yaqshid and Wadajir, while Waberi received a low literacy and a high illiteracy rate compared to other districts. Hence, it is concluded that literacy rates amongst the respondents across all districts were found to be closer to each other. However, significant differences were observed amongst the respondents' literacy rates in the two districts, Howlwadag and Waberi.

### Who Decides if the Child Should Be Vaccinated?

Polio vaccines prevent diseases that can cause serious illness, long-term disability, and even death. We asked respondents, "Who decides if the child should be vaccinated? Overall result shows mother is the dominant decision-maker with a frequency of 652 (59%) and the father, 395 (35%), followed by grandparents, 35 (4%) and others (2%). Districts made different decision; for example, in Howlwadag, Yaqshid and Wadajir mother makes the decision to vaccinate her child, whereas in Waberi the father does majority. It is worth noting that, unlike in other districts, Waberi grandparents have also a role a child to be vaccinated or not. It shows the importance of family members in key decision-making regarding important domestic matters. Therefore, the whole family can play a vital role in guiding their families and motivating them towards polio vaccination, whereas women also need to be targeted in future campaigns because they are most likely to be found at home during door-to-door vaccination campaigns and they are also the primary caregivers to their children.

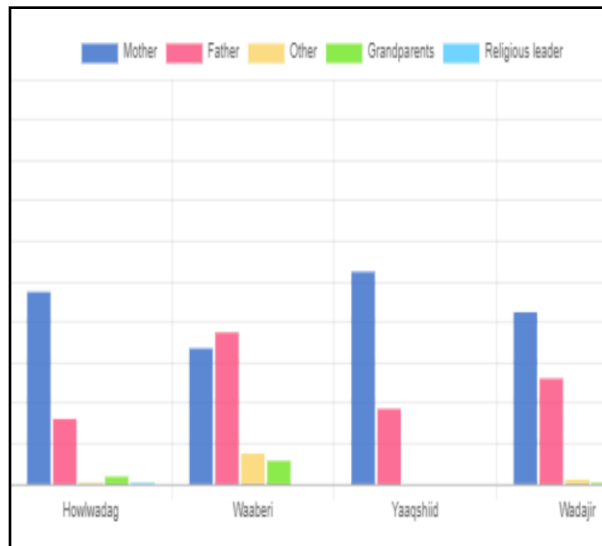


Figure 5: Who takes

### Awareness, Source/most trusted source of information about campaign

Before the polio team visited the houses, the polio campaign was launched through mass media, including TV, radio, and outdoor posters/banners. Various polio-related messages were broadcast through electronic media (i.e., TV and radio) in the target area. This part of the report describes the overall usage of media and visibility of communication messages to their target recipients in the target study area.

### Campaign Awareness Before Child was Vaccinated?

Target respondents were asked whether they had heard polio messages about the upcoming campaign before the child was vaccinated. The finding shows that polio

awareness messages were conveyed to the certain percentage of respondents (683 or 62%) while those who did not hear them were 426 or 38%. District wise, there were so some variations; according to the chart, 7 indicates that Yaqshid, Waaberi and Wadajir had heard the messages before the campaign started; however, in Howlwadag, findings show a lower rate of pre-campaign awareness. As far as the overall visibility of the mass media polio campaign is concerned, it is witnessed that 62% of media user respondents from all districts were conveyed messages of the polio awareness campaign. Out of the total of 1,109 respondents, 683 received polio awareness messages. Hence, it can be safely said that the awareness campaign has been successful in term the visibility of polio awareness messages through mass media.

### Source of Information About the Campaign

A mass media campaign helps in raising the polio awareness level among target respondents and enhancing their understanding of the health effects of polio. Respondents were asked, "Where did you get the information about the last polio campaign?" Different media types were revealed including radio, television, community mobilizers, health Center/MCH staff, and social media (Facebook, YouTube,

Twitter, etc.). A follow up question was asked: which source of information do you trust the most? Table 1. It shows that among the respondents, radio is the most popular medium among the target respondents, followed by television and then community mobilizers, whereas mounted vehicles were found to be the least popular medium. Table 1 expresses a summary of the types of media used by the target respondents.

Table 1 Source of Information

| Rank | Radio    | Tv        |
|------|----------|-----------|
| 1    | Kulmiye  | Universal |
| 2    | Shabele  | SNTV      |
| 3    | Goobjoog | Dalsan    |
| 4    | Dalsan   | Shabelle  |

Table 2 Popular Radio & TV channels

| Source                   | Frequency | Percentage |
|--------------------------|-----------|------------|
| Radio                    | 408       | 37%        |
| Television?              | 281       | 25%        |
| Health Centre/MCH staff? | 180       | 20%        |
| Social Media             | 110       | 10%        |
| Community mobilizers?    | 47        | 5%         |
| Others                   | 40        | 3%         |

As it has been proven and evolved empirically from the findings of this report that radio is the most accessible media among the target respondents and sampled

population overall, likewise this media type is also most seen on a daily basis compared to all others.

The most popular radio and TV channels were identified in table 2. It is strongly recommended that future mass media campaigns to raise awareness about polio and the importance of its vaccination focus more on these TV and radio channels, have the largest audiences. The following table has been compiled on the basis of the channels reported as having the highest priority by the respondents.

As far as media-wise visibility of polio related messages is concerned, it is obvious from Table 1 that radio media has contributed the most in this regard, followed by television, mobilizers, and cars, where radio performed better than TV places.

### Number of Children Up to Age 5 Years (Vaccinated and Unvaccinated)

This is an interesting demographic feature of the surveyed respondents, showing the number of children below the age five eligible for vaccinations in the selected area. The study discovers that 868 (78%) of children under the age of 5 live in visited houses in four districts. Findings also indicate Wadajir has the most children under five, followed by Waberi and Holwadag, the list is

Yaqshid. Respondents were asked a follow up question, if the children were vaccinated, as shown in Chart 8, the frequency of vaccinated children was 790 (71%) while that of unvaccinated children was 319 (29%).

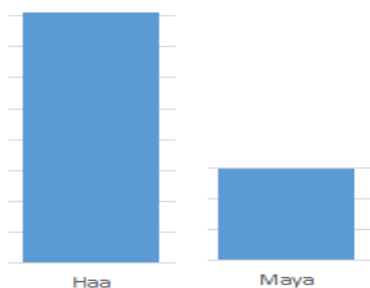


Figure 8: Vaccinated and Unvaccinated

### Reasons for Non Vaccination of Respondents' Children

The finding expounds different reasons for the non-vaccination of children by the respondents in the polio vaccination campaign. In the overall scenario, there were 298 out of 1,109 parents in the sample who did not get their children vaccinated. The study revealed two main reasons for the non-vaccination of children against polio. These are rumor or misperception (34%), fear of AEFI (22%), doesn't trust the vaccine dispenser (17%), and parents didn't know about the campaign (21%) meanwhile, 6 percent of respondents refused to give the reason for their non-vaccination, which also translates to either the earlier stated reason or

the respondent's own will against vaccination. In the overall scenario, these five responses make up 94% of the total of 1109 respondents who couldn't get their child vaccinated.

### After Receiving Vaccine (Adverse Events Following Immunization)

This section elaborates on respondents' perceptions regarding vaccine adverse events following immunization in all rounds of the assessment survey. In this regard, the section delineates the answers to the question regarding whether a child experienced any discomfort after receiving a vaccine. Frequency responded yes was 948 (85%), while those who said no were 161 (15%).

It is obvious from the chart that the child experienced discomfort after receiving OPV. The most common responses were: soreness near the injection site, redness near the injection site, and low-grade fever, which are common.

### Knowledge of the Polio and Vaccines

This section displays the results of the respondents' perceptions regarding vaccine preventable diseases in the target districts in Mogadishu. Respondents were asked if they knew the diseases against which children were vaccinated during the campaign. Table 4 describes that the largest percentage of

respondents from Howlwadag (98%) could correctly recall saying “polio” as one of the vaccine-preventable diseases, followed by Wadajir (94%), Yaqshid (89%) and Waberi (87%) respectively. In summary, it is concluded that knowledge of the vaccines is lower among the respondents in Yaqshid and Waberi districts, which needs to be addressed during the upcoming campaigns.

*Table 2 Knowledge about the polio vaccine*

| District  | Yes in % | No in % |
|-----------|----------|---------|
| Howlwadag | 98%      | 2%      |
| Wadjir    | 94%      | 6%      |
| Yaqshid   | 89%      | 11%     |
| Waberi    | 87%      | 13%     |

#### **Awareness of Polio: “As a Dangerous Disease”**

Table 4 validates the answers given by the respondents in response to the question, “**Do you think polio is a dangerous disease?**” The table exclaims that the response was highest, i.e., 97%, in Howlwadag, and Wadajir, meanwhile, Yaqshid and Waberi have shown a very little difference with the lowest scores of 93% and 90%, respectively. The overall average across the four districts was found to be 95%, with a deviation of only 5%. This indicator is satisfactory; therefore, the

campaign designers may focus on more details of the campaign messages.

*Table 3: Polio Awareness District Wise Analysis*

| District  | Yes in % | No in % |
|-----------|----------|---------|
| Howlwadag | 97%      | 3%      |
| Wadjir    | 97%      | 3%      |
| Yaqshid   | 93%      | 7%      |
| Waberi    | 90%      | 10%     |

Respondents were asked follow-up question, “**Do you think polio can be cured?**” As per table 5, the respondents’ awareness level is high among the residents of Howlwadag (98%) followed by Wadajir (95%), Yaqshid, (91%) and Waberi (88%), which clearly shows a positive trend, although Yaqshid and Waberi have shown little difference. This higher level of polio awareness may be due to mass media polio awareness campaigns conducted in the target areas.

*Table 4: Polio Awareness District Wise Analysis*

| District  | No in % | Yes in % |
|-----------|---------|----------|
| Howlwadag | 98%     | 2%       |
| Wadjir    | 95%     | 5%       |
| Yaqshid   | 91%     | 9%       |
| Waberi    | 88%     | 12%      |

On the other hand, to measure respondents’ knowledge of polio, it was asked, “**Do you think polio can be prevented?**” findings verify multiple answers from the respondents of different target districts in Banadir. In an overall scenario, it is found that 92 percent of

respondents responded that it can be prevented; however, 5% said, cannot be prevented, while 3% gave different mixed answers.

As far as district-wise awareness of respondents regarding the opinion of polio can be prevented, it is obvious from the findings that the largest percentage of respondents (i.e., 95%) are from Waberi, which is a positive outcome because previous responds were behind other districts. Therefore, it is concluded that the target respondents were aware that polio can be prevented. However, there is still room for improvement in this regard, and this aspect may be highlighted in future media campaigns.

**About the oral polio vaccine (OPV):** As it has been described in previous sections of the report, mass media has an impact on polio campaigns in the study area. Respondents were asked, **Can OPV protect children from polio?** Closer similarities are found in the answers of the target respondents across all the rounds of the assessment survey. About 9 out of 10 people said yes, OPV protects children from polio. A follow-up question was asked to the target respondents, which was, **do you think oral polio vaccine (OPV) is safe?** According to chart 10, higher

percentages have responded yes. Therefore, it is concluded that the selection of the sample in four different districts served the best purpose of the study. Moreover, the majority of the population is aware of the health consequences of polio, and prevention is better than cure.

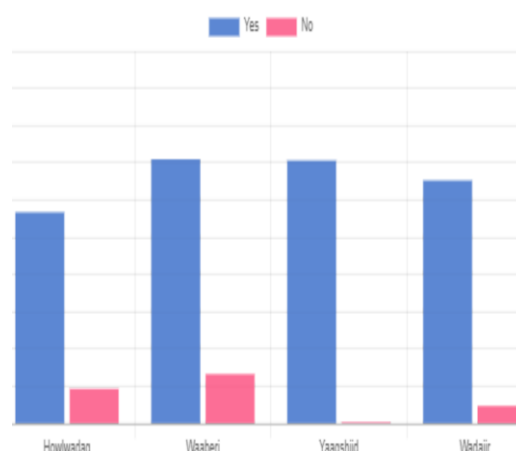


Figure 10: OPV reliability

### OPV Knowledge and risk perception

Oral poliovirus vaccines (OPV) are the predominant vaccine used in the fight to eradicate polio.

There are different types of oral poliovirus vaccines, which may contain one, a combination of two, or all three different serotypes of attenuated vaccine. Respondents were asked, **do you believe your children should receive the oral polio vaccine (OPV) several times at every campaign to be fully protected?** According to Table 6, different responses have been given;

however, most of the respondents agreed on yes. District-wise, Yaqshid receives the highest ranking, (90%) followed by Holwadag, while Wadajir and Waberi receive the lowest ranking.

*Table 5 Giving Children OPV at various times*

| District  | Yes in % | No in % |
|-----------|----------|---------|
| Yaqshid   | 90%      | 10%     |
| Howlwadag | 87%      | 13%     |
| Wadjir    | 82%      | 18%     |
| Waberi    | 80%      | 20%     |

A follow-up question has been asked to the respondents. **Do you think additional OPV doses are required even if they have been fully vaccinated at the health facility?** Most of the respondents responded no; however, one respondent said, “Why not? if doctors recommend to getting additional doses, we should give them to our children as well,” while a mother of three said, “Why do I give my children additional OPV” “if they have completed the cycle, extra doses can cause disease”.

Table 7 indicates Waberi is leading rejection of additional doses, followed by Yaqshid and Wadjir; it is interesting to see Howlwadag is at the bottom of this variable compared to others. It can be concluded that Howlwadag has a more knowledgeable society than other districts.

*Table 6: Additional OVP*

| District  | No in % | Yes in % |
|-----------|---------|----------|
| Waberi    | 89%     | 11%      |
| Yaqshid   | 87%     | 13%      |
| Wadjir    | 82%     | 18%      |
| Howlwadag | 80%     | 20%      |

### Childhood Immunization

Childhood immunizations are the best way to protect your child against many different infections and diseases. Before vaccines, many children died from diseases like measles, whooping cough, and Haemophilus influenza. However, low disease rates have been achieved through high rates of immunization coverage. No matter the age of your children, childhood immunizations are one of the best ways you can protect them. During post-campaign communication assessment, respondents were asked, **have you ever heard of childhood immunization?** about six out of ten of the respondents from Holwadag and Wadajir districts have confirmed that they have heard, while five out of ten of the respondents from Yaqshid and Waberi have not heard of childhood immunization.

*Table 7: Childhood immunization*

| District  | Yes in % | No in % |
|-----------|----------|---------|
| Howlwadag | 64%      | 36%     |
| Wadjir    | 62%      | 38%     |
| Yaqshid   | 58%      | 42%     |
| Waberi    | 55%      | 45%     |

A follow-up question was asked; do you think it is important to vaccinate your child as recommended by the childhood/routine immunization calendar? About five in ten of the respondents have answered “Yes,” while other 50% have said “wise verse” Thus, we concluded that, awareness is below expected level and still there is gap to fill for the upcoming campaigns.

### **Perception about vaccinators and community mobilizers deployed during campaigns**

Social organizers mobilize communities and encourage polio vaccine uptake. They make direct contact with households and make sure that the children under five years receive the oral polio vaccine (OPV). Each round of vaccination, community mobilizers visit all the households in the camp to inform the residents about the timing of the campaign and why they need to let their children be vaccinated. Literature shows the work done by community mobilizers helps to raise awareness of vaccination benefits to nearly 100 percent among local populations. Thus, respondents were asked: **Are you familiar with the house-to-house social mobilizer who usually works in your community?** Uniformly, most of the respondents for all districts said yes; however, a significant number of respondents

have shown concern about vaccinators. A father of two said, “Although I don’t know their names, those with OPV are the community youth who have no health background; how can I trust such a person with my children?”

We asked a follow-up question, were you happy with the behavior, appearance, and language of the house-to-house social mobilizer who visited your house?

All the respondents have indicated that the social mobilizers were good-looking respectful, and good listeners. A mother of five said, “Mobilizers never tried to come back every time even if you rejected them, they came back again and again until you accepted the vaccine for your child”. A mother of three said, “They are not doctors, and they don’t know what kind of vaccine they want to give my children; I prefer to go to the MCH rather than boys and girls with OPV”

### **Discussion**

The aim of this project is to assess post-campaign communication and obstacles to polio eradication in four districts in Banadir. Study findings have shown that misinformation, fear, and a lack of trust in the vaccinator and parents didn’t know about

campaign are the main variables contributed the most to vaccine hesitancy or refusal. However, literature shows similar findings in other African countries. Research conducted in Nigeria found that misconceptions accounted for 59% of the reasons for refusals. Our research findings also indicate that low vaccine literacy also contributes to vaccine refusal. Another study conducted in Pakistan found that 84.8% of vaccine refusal was caused by the negative perception of vaccines and the high illiteracy rate.

## Conclusion

This report presents the outcome of an assessment based on the findings of four districts in Mogadishu, Somalia. The assignment was initiated in order to assess the UNICEF Polio Program's mass media campaigns with respect to outreach to targeted audiences, effectiveness and understanding of the messages, and effectiveness of the various media, channels, and contents.

A mass media polio awareness campaign includes polio related messages on the, radio and TV for the population of the target areas. The whole preamble of this report is devoted assessing the impact of the mass media campaigns using a questionnaire survey. The study produced a set of recommendations to

help communities generate polio vaccine demand creation.

One of the underlying findings of the display campaign is that communication campaigns can lead to the behavior change of individuals, which can lead to a reduction in the refusal of children's vaccinations and reaching zero dose.

## Acknowledgement

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