



Ipsos Public Affairs

The Social Research and Corporate Reputation Specialists

REPORT ON FINDINGS IN KARACHI

QUALITATIVE ANALYSIS OF POLIO VACCINATION REFUSALS AMONG CAREGIVERS AND HIGH RISK & MOBILE POPULATIONS IN PAKISTAN

**The Government of Pakistan's National Emergency Operations Centre
for Polio Eradication Programme**

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ACRONYMS

DG	Discussion Guide
DHCSO	District Health Communications Support Officer
FATA	Federally Administered Tribal Areas
FGD	Focus Group Discussion
FLW	Front Line Worker
HRMP	High-risk Mobile Population
KAP	Knowledge, Attitude and Practice
NEOC	National Emergency Operations Center
SIA	Supplementary Immunization Activities
UNICEF	United Nations Children's Fund
WHO	World Health Organization

EXECUTIVE SUMMARY

The polio eradication efforts have made impressive strides in Pakistan over the past years, eliminating vast majority of polio cases; in 2017, only eight polio cases were recorded in the country, and the campaign hopes that 2017 was the last year where Pakistan had any cases of polio.

Despite the extensive accomplishments in expanding polio vaccination across the country, the campaign has been unable to eliminate the last vestiges of polio in Pakistan.

This study, commissioned by UNICEF to Ipsos Pakistan, explores reasons for refusals to vaccinate in the most resistant communities and ways to motivate vaccinators who are at the frontlines of polio eradication work. This report presents the first set of findings under the study, collected from 14 union councils in Pakistan where refusals to vaccinate children from polio are the highest. Subsequent round of the study will explore reasons behind refusals to vaccinate and ways to increase motivation of frontline workers.

The study found a lot of commonalities in the reasons behind refusals, sources of information used, and the chain of reasoning employed in the covered groups of settled as well as mobile refusers, male and female, across the 14 target union councils.

The refusals are mostly conveyed to the vaccinators by female caregivers, but driven by the male caregivers or their parents. Male caregivers mostly remain unengaged in the polio campaign effort and form their opinions in hujras – male gatherings. Vast majority of refusing women note that as soon as their husbands are convinced to allow polio vaccination, they will be happy to oblige.

Majority of refusers admit having heard vaccinators or polio campaigns on TV and posters that polio is a dangerous disease which can cause paralysis and thus cripple a child for life, and polio vaccination must be given to every child under the age of five years to protect them from being affected by the disease. Many female caregivers claim to forget all their teachings as soon as the information session is over. Approximately half of the refusers have seen polio campaigns on TV or on posters, but dismiss them as lies. Much fewer refusers have any recollection of the Sehat Muhafiz program, and even fewer know what this program is about.

Vast majority of refusers follow the decision of their elders; in the case of females, the opinion of husbands and in-laws. Other opinion influencers include family, neighbors and friends. The main source of information is the word of mouth, followed by social media, TV and newspapers.

Vast majority of the refusers have become exposed to anti-polio vaccination videos which are spreading refusals. Refusers source their information from anti-vaccination opinions in the Ummat newspaper as well as on talk shows on Bol TV and ARY TV. Aside from these mass media channels, refusers quote advice by doctors, local imams and neighbors or relatives who advocate against polio vaccines.

Below is the list of reasons for refusals grouped along the fix groups of refusals used traditionally by polio campaigns:

- Repeated campaigns: too many visits, visitors and too much vaccine
- Destructive rumors:

- The vaccine causes polio, includes haram ingredients or causes infertility, prevents women to give birth naturally and spoils the child's personality
- The vaccine is not good for Muslims; it has not been tested in Pakistan and no one knows its ingredients; religious scholars and doctors say the vaccine is haram/not good
- Misconceptions: Doctors are against the polio vaccine; it's conspiracy of the West / not good/useless/has no benefits/ there's no need for it and it can't help in an environment so full of garbage
- Direct refusals:
 - People don't know what it is, don't trust the vaccinator and fear that it will make children sick when parents cannot afford treatment
 - People won't allow vaccination until other problems are also addressed
- Religious: person's health is in God's hands; polio vaccination will turn the child away from religion, and religious scholars cannot agree if the vaccine is halal or haram
- Sickness: caregivers are afraid of the potential damage that the polio vaccine may cause to the child's health

The first line of people who handle the above-listed refusals is vaccinators. Almost all refusers say they don't trust the information that vaccinators provide and complain that vaccinators are not clean, not polite, not educated, not knowledgeable and not local/don't belong to their tribe. The vaccinators are highly motivated to do their job. They would enjoy getting awards, certificates, and other recognition, especially references on TV talk shows. They would also like to wear uniforms and be recognized as government representatives.

The vaccinators report that it helps to identify the reason behind the refusal and to use the appropriate tool – whether the Fatwa Book, influencers or videos, but some of the refusers will never agree to vaccinate no matter what. After administering polio vaccine, vaccinators mark a finger of the child to signal future vaccinators/ monitors that this child has been vaccinated. Sometimes, vaccinators do not mark the child's finger to help the female caregivers avoid the wrath of their husbands. In a couple of cases, female caregivers reported marking their child's finger themselves to avoid vaccination.

The high-risk mobile persons (HRMPs) is one of the types of refusers. They travel to their home places once or twice a year on average. Many of them get vaccinated at borders and check posts. Overall, their perceptions and attitudes are mostly identical to those of settled caregivers.

The polio eradication campaign must tailor its efforts to the main refusers: male caregivers and in-laws and address the key reasons for refusal. Particularly, the campaign should educate the caregivers on what polio and polio vaccine is- its ingredients, benefits and potential effects. Rather than direct advertising, the campaign should use content embedded in programming – movies and programs that highlight polio issues as part of the programming and focus on social media and articles in Ummat newspaper, include testimonials by polio survivors, religious leaders, doctors, politicians and other opinion makers. If resources allow, the campaign should address some of the other problems that the refusers raise – such as removal of garbage from the area or construction of local medical facilities.

It is also important to understand that refusals are normal. The campaign should be prepared to bear higher costs per vaccinated child. At some point, a decision will have to be made if these last refusals must be converted through the use of force (police or rangers) or left unvaccinated.

1 BACKGROUND

To help end polio throughout the world, Governments, in collaboration with Global Polio Eradication partners, are implementing multiple polio eradication campaigns in high-risk regions. In recent years, Pakistan has been one of the few countries where polio cases still occur – alongside with neighboring Afghanistan and, until last year, Nigeria. The target now is really close: in 2017, only eight polio cases were reported in Pakistan (a 97% reduction from 2014's total of 304)

One of the main reasons why polio is still found in Pakistan is that some parents keep refusing to vaccinate children. In order to achieve the goal of polio eradication, it is important to understand the reasons behind such refusals and how the behavioral challenges can be addressed. To guide the national communication strategy on addressing the fears and concerns regarding polio vaccination that prevail among parents and other caregivers of children under the age of five, Harvard Opinion produced the Knowledge, Attitude and Practice (KAP) study in Pakistan last year with under the direction of the NEOC

In order to elaborate on the findings of the KAP as well as data from the 2018 Polio Supplementary Immunization Activities (SIA) campaigns in Pakistan, UNICEF contracted Ipsos Pakistan Market Research Company to conduct a nationwide research study to gain a more in-depth understanding of this data, particularly, to crystalize the reasons behind the refusals and ways to address them. The findings will be used by the NEOC to address vaccination refusals through targeted messaging as well as engagement with caregivers and the communities most at risk of contracting polio.

1.1 Geographical Scope

The study focuses on high-risk areas (identified in the KAP and SIA) where the refusals of polio vaccine are high in the provinces of Sindh, Baluchistan, Khyber Pakhtunkhwa and Punjab as well as the Federally Administered Tribal Areas (FATA). The study works to understand why some people are refusing to provide polio vaccine to their children, to find reasons behind this, and to identify ways to eliminate – or turn around – these refusals.

In Sindh, the study focused on 14 union councils of **Karachi** in Gadap, Gulshan, Orangi, Gujro, Baldia, Gulberg and Landhi, where the number of refusals for polio vaccination is particularly high. Both KAP and SIA campaign data indicate that such refusals in these areas are mostly caused by **misconceptions and rumours** such as that polio drops make people infertile or that the vaccination is haram (religiously not acceptable) due to haram ingredients. These areas also have low **trust in vaccinators**, which may be due to the multitude of campaigns. Another key factor in the high level of refusals in Karachi areas is the large presence of mobile populations - people who migrate frequently through polio-infected areas thus contributing to high risk virus transmission. All of these issues were explored in-depth during the study.

1.2 Purpose of the Assignment

The basic purpose of this operational research study is to identify the underlying reasons of caregiver refusals to administer polio vaccines to children under the age of 5 years; the reasons for low trust in polio frontline workers/vaccinators who directly work with community members including caregivers; and ways to address the aforementioned reasons.

The assignment consisted of discussions with caregivers of children under the age of 5 years and the frontline workers who deal with refusals in order to explore and understand the reasons behind key findings of the KAP. One of the primary groups of interest was high-risk mobile population (HRMP) - families who have child/children under 5 years of age and move frequently from polio virus infected areas to non-infected areas due to seasonality of their work or other reasons, therefore increasing the risk of polio virus transmission. This is a particular threat to the success of the Pakistan polio programme due to rising insecurity in Afghanistan.

The study provides an in-depth understanding of the attitudes and behaviors identified in KAP study especially behaviors pertaining to caregiver refusing to vaccination every time they are offered due to fatigue, misconceptions or destructive rumors.

Notably, as prevalence of other factors has been declining due to the continuous polio awareness programs, the repetitive nature of campaigns has led to the increasing levels of fatigue both among the polio workers/vaccinators and caregivers, whereby some people are becoming increasingly more reluctant to vaccinate their children over and over again.

Below are the issues that were covered with each of the target audiences.

1. Destructive Rumors	2. Direct Refusal	3. Misconception
Polio drops make boys infertile Polio drops make girls infertile Polio drops are very likely to give child polio. Polio drops can give a child HIV/AIDS. Polio drops are not halal. Polio drops are made with urine or blood.	Too many visits. Trust on vaccinator- Prefer private vaccines Didn't work on neighbours or friends child.	Heard something refer to any example
4. Sickness	5. Religious refusals	6. Repeated Campaign
Child feels listless, vomits and/or has fever or infections	Religious clerks / someone prohibited vaccination for religious reasons	Repeated rounds of vaccination – too much vaccination

The discussion with caregivers worked to identify why and how often caregivers refuse to vaccinate their child, how their concerns can be addressed, how can polio workers build trust and improve their understanding of the programme on community members in order to convince them to vaccinate children against polio.

For HRMP, we sought to understand their movements, their concerns related to health, their preferred way to vaccinate children, as well as their fears related to security.

Similarly, the discussion with frontline polio workers aimed to identify why parents refuse to vaccinate, and ways that trust can be built between vaccinators and community members. Additionally, we explored what gaps might occur in the program and ways to increase motivation of polio frontline workers/ vaccinators.

The data centered on cross-sectional studies through which information was collated from the three groups. Below are the focus areas:

- Identifying the factors that, in community's perception, make the vaccinators better and the factors that contribute to the perception of vaccinators as untrustworthy.
- Obstacles to vaccination as perceived by the community (e.g., fatigue, rumors, demands, lack of trust in vaccination and vaccinator), reasons behind them and ways to address them.
- Ways to obtain collaboration/acceptance of HRMP to vaccination, including the profile of potential vaccinators, HRMP concerns and reasons behind those concerns, as well as ways to eliminate them.

2 METHODOLOGY

2.1 Research Instruments

This is a classical qualitative research study, for which Focus Group Discussion (FGD) is considered to be the best tool to effectively obtain information from respondents. FGDs were conducted with three distinct target groups:

- Caregivers – parents with children under the age of 5 years and who refuse to provide polio vaccine to their children;
- HRMP- families of Pashto/Afghan origin who 1) seasonally or frequently move from one place to another, 2) have children under 5 years of age and 3) refuse or not polio vaccination to their children.
- Polio vaccinators/frontline workers - professionals who 1) visit communities to address refusals or to conduct other activities of polio campaigns, and 2) have direct one-to-one interaction with community members.

Each FGD followed a discussion guide comprising a set of open-ended questions which will take the discussion through a “deep dive” into the core objectives of the study. The discussion guides were reviewed and approved by the client.

2.1.1 FOCUS GROUP DISTRIBUTION

FGD participants were selected from the lists shared with Ipsos by NEOC and UNICEF; these lists included “refusers,” HRMP and polio workers. The participants were broadly grouped into separate FGDs based on the following criteria:

1. Caregivers:
 - Male and female caregivers who have children under 5 years of age;
 - Refuse of polio vaccination – caregivers who have refused to get their children vaccinated every time a campaign is held
2. Polio workers – Area in Charges, Union Council Communication Officers and others who:
 - Work on polio campaigns or polio vaccination
 - Have direct contact with community members; and
 - Are responsible for addressing refusals on a regular basis.
3. HRMPs
 - Male and female caregivers (mothers and fathers) with children under 5.
 - Move from one place to another between polio virus infected and non-infected or other infected areas along the “Southern corridor” (e.g. between Karachi, Quetta Block and Kandahar) thereby increasing the risk of polio virus transmission from one area to another.
 - Afghan and Pakhtun tribes.

Due to the deeply rooted customs that prevent public interaction of women and men in many of the traditional societies – including the research target audiences, Ipsos conducted separate FGDs of male and female caregivers and HRMPs to ensure a free and comfortable environment for information collection. Meanwhile FGDs of polio vaccinators/workers included representatives of both genders due to their exposure to different levels of socialization in the workplace and work requirements.

Each FGD with caregivers or HRMPs included 6 to 8 participants, while the number of polio vaccinators/workers in each FGD varied depending on the area and on polio vaccinators’/workers’ availability. All FGDs included a diverse mix of participants based on the number of children they have and other socio-economic criteria.

2.1.2 FOCUS GROUPS BY TARGET SEGMENTS

Type	Male	Female
Caregivers (Parents)	X	X
Frontline workers	joint	
HRMP	X	X

2.1.3 FOCUS GROUP DISCUSSIONS BY TYPE

Ipsos conducted 42 FGDs in 14 high-risk union councils in Karachi, Sindh (out of a total of 162 FGDs in 54 high-risk union councils across Pakistan). This number of FGDs provided full coverage of all focus union councils and all distinct target audiences identified. To ensure that this number of FGDs provide maximal granularity of findings that can be used to guide the work of polio campaigns in effectively reducing refusals and therefore increasing the coverage of polio vaccination in these high-risk areas, Ipsos worked with key stakeholders to finalize the list of various FGDs across the 14 UCs during the field consultation organized by NEOC, UNICEF and Ipsos in Karachi on February 6, 2018.

UCs were screened based on the prevalence of HRMP, and FGDs with this target audience was conducted in those UCs where the prevalence was highest. Numbers of FGDs with settled caregivers and FLWs were again based on the density of refusers. As a result, each FGD included relatively homogenous groups of participants for conducive discussion and fact-finding.

The workplan for conducting FGDs in Karachi, Sindh is included in the annex.

2.1.4 FGD MODERATORS

Based on the number and profile of FGDs planned for Sindh, Ipsos used two highly experienced Pashtun moderators - one male and one female to cater to that the highest incidence of vaccine rejections among the Pakhtun population in the target area. Moderators receive a thorough briefing to ensure their understanding on the research topics and subtleties.

2.2 Participant Selection

The study used *the stratified purposeful selection technique* for selection of caregivers and HRMP participants from the list of households who had refused polio vaccination two or more times; the list was provided to Ipsos by NEOC and UNICEF.

For HRMPs, we also used a list that is maintained by the Provincial Emergency Operation Centers on mobile populations recorded by community-based volunteers. Stratified purposeful sampling is widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest. We then further subdivided the caregiver and HRMP groups into subgroups by gender. Using this technique, from the list of HRMPs we selected separate groups of acceptors and refusers in order to seek out their unique perspectives. Local polio workers supported the Ipsos team in identifying families and participants for research based on the aforesaid lists.

2.2.1 RECRUITMENT PROCESS FOR HRMP AND CAREGIVER GROUPS

Step 1: NEOC and UNICEF helped Ipsos connect with District Health Communication Support Officers (DHCSOs) who have the needed knowledge of areas where caregivers who refusing vaccination, including HRMP, live. The DHCSOs helped the Ipsos recruitment team to identify and reach each target population.

Step 2: We collaborated with DHSCOs to identify respondents who fit the inception report's profile for target groups. The Ipsos team of recruiters filled out recruitment screener forms with the criteria for hiring FGD respondents.

Step 3: Those 10-12 respondents who best fit the criteria and agree to participate in FGDs and share their inputs were invited for the FGD.

Step 4: From the 10-12 respondents selected for the FGD, we shortlisted 8 people based on language barriers, vocal power, ability to communicate and availability to participate throughout the entire duration of one-hour long FGD. We ensured that FGD participants constitute a diverse mix of respondents by SECs, age and the number of children.

2.2.2 RECRUITMENT OF POLIO FRONTLINE WORKERS DEALING WITH REFUSALS

Polio vaccinators/workers were recruited from the list provided by NEOC and UNICEF and based on the availability of these individuals. The process was carried out in close coordination with UNICEF. We will make sure to include a diverse mix of respondents based on their gender, share of refusals and other pertinent characteristics in order to maximize their diversity and -- most importantly -- the insights collected. The profile of polio workers for the Sindh FGDs were finalized at the February 6 field consultation meeting with major polio stakeholders.

2.3 Venue

For convenience of respondents, FGDs were conducted within the target area, in a house of an influential person or a similar facility within the community. Local DHCSO was engaged to help Ipsos identify and arrange the venue due to their familiarity with the area and trust among the community. This approach reduced security concerns and maximized comfort for the respondents.

Even though Ipsos worked to ensure that the selected premises are maximally prepared for the FGD (e.g., ensure silence in the room, proper space for everyone to sit, etc.), since these premises are beyond Ipsos control and the areas are slums, some compromises were necessary. We ensured that those compromises did not impact the quality of FGD or its findings.

2.4 Design of Discussion Guides

Ipsos used a wide variety of sources to design comprehensive and highly effective discussion guides for community members and polio vaccinators/workers with the objective of identifying micro-level issues related to resistance/reluctance to vaccinate and possible solutions to increase demand for vaccination and/or support to the polio vaccination program.

The sources included KAP findings, analytical knowledge, 2018 SIA campaign data, in-depth discussions with the NEOC and UNICEF polio team and strategic sessions with polio eradication practitioners including WHO and the BMGF. For example, the Provincial Emergency Offices (PEOC) provided valuable information to help Ipsos localize issues that need to be addressed. Additional insights were obtained during the February 6 field consultation meeting with stakeholders, including an opportunity for stakeholders to review the discussion guides and provide inputs and comments on them. Together, these sources equipped us with robust knowledge on the issues the program is facing, therefore enabling construction of high quality discussion guides for each target group of respondents.

All questions in the discussion guides were tailored to identify localized, target-group specific reasons for refusals and ways to eliminate those reasons.

2.5 Data Recording, Sharing, Analysis and Interpretation

Data Recording

- FGDs were recorded in audio form; no video recordings were used to avoid causing discomfort to these groups. Transcripts of each FGD were completed by Ipsos.
- Notes were made by moderators on important points.
- Top lines were recorded by type of the FGD per UC cluster for all regions, and as much as possible will point out any and all findings unique to any particular union council. Top lines were submitted to NEOC and UNICEF within one week of the FGDs closing per province.

DATA SHARING, ANALYSIS AND REPORTING

- The gathered data in notes form was shared as top lines by UC, UC cluster or any other smallest grouping unit which provides a comprehensive overview of insights for that grouping. As much as possible, the top lines will point out any and all findings unique to any particular union council.
- English-language translations of the transcripts were shared with the data analyst and the client.
- The findings report was developed based on findings per UC and type of respondents in order to provide a comprehensive set of insights. As much as possible, the top lines point out any and all findings unique to any particular union council.

2.5.1 PREVENTION OF BIAS

Apart from the areas where NEOC and UNICEF helped Ipsos select target audiences and meet the right persons, the Ipsos research team worked independently throughout the entire process. The Ipsos team was responsible for carrying out FGDs, convincing the respondents and assuring them that Ipsos doesn't belong to any organization working for polio. Ipsos did NOT tell the respondents that this research is being conducted for the Government of Pakistan, UNICEF, or other Global Polio Eradication Partners.

Additionally, the moderators were neutral and assured the respondents that their goal was to understand health issues in local communities and types of vaccines communities prefer. Polio was discussed in the broader context of other vaccines; Ipsos minimized communicating directly about polio in order to avoid risk of being perceived as part of polio campaigns.

The following protocols were used to prevent bias in the interview process:

- Moderator instructions were included in the discussion guide, and moderators were trained to follow these instructions;
- There are no right or wrong answers from respondents;
- Moderators remained neutral throughout the discussion and ensured that all respondents share their insights and experiences;
- Moderators received information specific to the province and target UCs; and
- Moderators were guided how and when to probe; these instructions were included in the discussion guide at each space where the moderator needs to probe more.

2.6 Quality Assurance

2.6.1 FIELDWORK APPROACH AND QUALITY ASSURANCE MEASURES

Ipsos is an ESOMAR* member and adheres to the highest standards for market research and has been awarded numerous certifications for quality, ensuring data security, confidentiality, and participant safety, including the ISO 20252. Our team members are active members of ESOMAR, The World Association for Public Opinion Research (WAPOR), and numerous other professional organizations. Our project work plans include a "risk register", overseen by a senior "Corporate Monitor"; it incorporates professional and research quality standards, ensuring that these principles are monitored during each phase of a study, and, where appropriate, built into the design of the study itself.

2.6.2 PRE-TESTING OF SURVEY INSTRUMENT

To check the appropriateness of methodology, flow and language of questions, range/nature of responses, skipping instructions, incidence rate of qualified respondents against various criteria, we will pre-test each discussion guide with at least one relevant FGD. Prior to pre-testing with FGDs, we will also obtain feedback from field experts gathered at the February 6 field consultation of major stakeholders. Such extensive pre-testing will help us to finalize the optimum methodology and questionnaire for FGDs. Similar information sharing and pre-testing will be done in all of the provinces and FATA.

2.6.3 FIELD ACCOMPANIMENTS

At the beginning of survey, project in-charges/ executive/supervisors will accompany each moderator to at least one FGD to give corrective feedback to the moderator in order to ensure that moderators are well versed with methodology and handling of FGDs.

2.6.4 BACK CHECKING

Back Checking is done via telephone and in-person revisits to the household of the respondents. 25% of total work is back checked for each surveyor/recruiter for quality assurance. The field department conducts 10% back checking itself, and 15% is done by an independent quality control department. All screening questions are asked from respondents to check the eligibility criteria, time of interaction, recruiter's behavior and other factors.

2.6.5 LOG OF ISSUES FOR COMMUNICATION WITH FIELD AND CLIENT SERVICES

Strict supervisory standards are maintained to catch any kind of field or logistical issues early on and to address them, after consultation with the field and client services.

3 STUDY FINDINGS

3.1 Perceptions of Polio and its Risks

Majority of the refusers claimed that they don't have much knowledge of what polio is. "Every day polio staff come and ask to give your child polio drops but we don't because we don't know what's polio," said a male caregiver in Gadap UC 4. "Posters show that a child became lame due to polio but it could be caused by lack of calcium or a bone disease but they post these posters on every street... I have never heard any child lame. It doesn't sound dangerous to us because we haven't seen anyone with this disease," said another male caregiver in Gadap UC 4.

Some caregivers (including male caregivers in Gadap UC 4, male HRMPs in Gulshan UC 13 and male HRMPs in Orangi UC 13) acknowledge that vaccinators have explained about the benefits of vaccine: "The vaccinators said it's very good - your kids won't get paralyzed..."

Male caregivers in various communities, such as male HRMPs in Landhi UC 1, know that it's a virus, a disease, and that polio vaccination should be administered to a child until they reach the age of five years. Some caregivers, such as male HRMPs in Orangi UC 13 and male caregivers in Gulberg UC 8 acknowledge that it's a dangerous disease which has no cure. Many male caregivers are aware that other countries ban people with polio from entering because other countries don't want polio to spread, but attribute polio spread to a variety of causes from poor environment to lack of iodine and calcium.

Some caregivers, such as male caregivers in Gadap UC 4 and female caregivers in Baldia UC 1 seem to believe that polio is the polio drops.

Most refusers don't perceive that there are any benefits to polio vaccination and think that there's no difference whether they vaccinate children or not.

Many caregivers do not consider polio a serious disease: "Otherwise, why do children get ill after polio vaccination, while the ones who are not vaccinated are fine," said a female caregiver in Site UC 9.

Refusers reason that children get more fatal diseases than polio but there are no medical facilities available for other diseases. "One child in 1,000 suffers from poliomyelitis whether you vaccinate them or not. It is not a common disease or sickness like cough or flu that every child would catch easily," said a male caregiver in Gadap UC 5. Another male caregiver added: "If polio is a fatal and life threatening disease, then a child should get vaccinated immediately after birth. Why don't they vaccinate new born children?"

Caregivers also know how polio is spread, but some of the information is not necessarily correct. For example, a male caregiver in Gadap UC 8 said, "Polio is a virus that spreads through washroom lines from one home to another." Similarly, male HRMPs in Gadap UC 4 said that polio spreads through dirty water and toxic waste.

Many caregivers, especially female caregivers such as those in Baldia UC 1, said they don't know what the word "vaccination" ("hfazti teeke") means but they've heard it. Similarly, female HRMPs in Orangi

UC 13 say they don't know what vaccination, polio vaccine or polio is but have been told that polio vaccine is given so that their children would not get disabled.

Additionally, many caregivers (e.g., male and female caregivers in Baldia UC 3 and Gadap UC 8) have no issues with other vaccinations and believe they do prevent children from getting sick or reduce suffering if they do get sick. However, the same attitude does not apply to polio vaccines: "Kids get sick when take drink drops of polio and then my husband scolds me," said a female caregiver in Gadap UC 8.

3.2 Perceptions of Polio Vaccination Strategy

Refusers are quite negative about the strategy currently used for polio vaccination. Male caregivers in Gadap UC 4 explained the polio campaign the following way: "Our area is full of them all month. Whenever I leave home I see them on the streets." Another man in the same UC added, "at 8:30 am I lock my house from the outside and leave - they won't knock on the house that is locked...We are really fed up with them." Yet another male caregiver in Gaddap UC 4 asked to be told how many times they need to be vaccinated: "They should tell us how many times we have to have vaccination – whether it's 50 or 60 times - so that we can prepare ourselves for it."

Many caregivers remember that "In the past, they used to come once every six months, but now they come daily" (male caregiver, Gadap UCC 4).

One female caregiver in Baldia UC 2 explained the campaign activities the following way: "Last month, I told a female vaccinator that I don't vaccinate my children... soon, a man came asking me about my decision ...in about two hours, three more ladies and two men started banging on the door asking me to open it ... I am fed up- why they are coming one after another?"

Most of the refusers complained that so much money is being spent on fighting one disease while so many other issues, perceived by them as being more urgent, receive no attention: "We spend so much money on polio ... if we spend that much on improving our area, then we might not even need polio vaccines - diseases would no longer exist if we take care of cleanliness" (female caregiver in Baldia UC 2).

Many of the refusers also reason that the lack of cleanliness in their neighbourhoods counter-balances the impact of polio vaccination: "Our kids still get ill when they go out because of all the garbage around - so polio vaccines won't help us..." female caregiver, Baldia UC 2.

Several women in Gadap UC 4 complained that vaccinators have made their walls dirty by writing on them; multiple FLWs also noted that refusers complain to them about the writings on the walls and doors.

While many caregivers complain that polio vaccinators never give any information about polio and polio vaccine, some do admit that vaccinators provide information to them. For example, female HRMPs in Gulshan UC 13 said that polio teams give them long explanations about polio, but they don't believe any of it.

A small group of interviewed caregivers reported that "the program is good and it teaches good things" (female caregiver Baldia UC 3). Similarly, some caregivers know that vaccination campaigns are being run by NGOs and believe that "it's a good thing because NGOs are doing a lot of good things in my

village” (a male HRMPs in Landhi UC 1).

3.2.1 AWARENESS OF MEDIA CAMPAIGN

Some caregivers have seen polio campaign ads on TV and banners (including female caregivers in Baldia UC 1 and 2, Gadap UC 4 and 8, female HRMPs in Gadap UC 4, female caregivers in Site UC 9), but many doubt their credibility. “They only pressure to give polio vaccine and advice that it will save them from paralysis,” said a male caregiver, Gadap UC 5.

Some caregivers have only seen posters, mainly because they have no TVs (including male caregivers in Gadap UC 4 and Orangi UC 7, as well as male HRMPs in Gadap UC 5). Similarly, female caregivers in Baldia UC 1 and male caregivers in Baldia UC 2 haven’t seen any TV ads as they don’t have TV.

3.2.2 AWARENESS OF SEHAT MUHAFIZ CAMPAIGN

Many caregivers have never heard about the Sehat Muhafiz program; such caregivers include female and male caregivers (both settled and HRMPs) in Gadap UCs 4 and 5, male HRMPs in Gulshan UC 13 and female caregivers in Baldia UC 1. Additionally, even though male caregivers in Gadap UC 8 claim to have seen Sehat Muhafiz program on TV, they say it’s for politicians, not for normal people and it’s not on merit, suggesting they don’t know what the program is about.

Meanwhile, female caregivers in Baldia UC 2 have heard polio workers introduce themselves as Sehat Muhafiz and have seen Sehat Muhafiz ads on TV; some female caregivers in Baldia UC 2 have met Sehat Muhafiz at medical camps. Additionally, male caregivers in Gulberg UC 8 said they’d seen posters for the Sehat Muhafiz campaign and are aware that this campaign is run by the regional government.

Some male HRMPs in Landhi UC 1 have heard about the Sehat Muhafiz campaign from their friends who work in hospitals but don’t know what it is about. Similarly, some male HRMPs in Orangi UC 13 have heard about Sehat Muhafiz on TV but don’t know much about it; others haven’t heard about it at all.

3.3 Who Caregivers Consult with

Vast majority of the refusals are conveyed to vaccinators by female caregivers who are typically at home during the vaccinators’ visits. Most of the female caregivers refuse vaccination of their children because they’ve been instructed to do so by their husbands or in-laws. “My husband threatens to divorce me if I vaccinate the children...” said a female caregiver in Baldia UC 2.

While forming their opinions and decisions about polio vaccination, both female and male caregivers consult those around them. Male caregivers consult neighbors, friends, parents or other elders and relatives; in Gadap UC 5 and Gulberg UC 8, males said they don’t consult anyone as they are the decision makers. Multiple female caregivers noted that their husbands form their opinions at male gatherings where such issues as polio vaccination are discussed in detail. “My husband goes out, discusses things in gatherings and informs me later,” said a female caregiver.

Notably, one of the FLWs in Orangi UC 1 feels that at least in her area, the male caregivers don’t mind vaccination, it’s the female caregivers who don’t want to vaccinate their children. A few female

caregivers confirm that they do so due to their own convictions against vaccination; for example, female caregivers in Orangi UC 1 said that their main reason for refusal are their own experiences.

Female caregivers consult their husbands, grandparents (in-laws), neighbors, family/relatives and friends. The decision of the husband or parents-in-law is typically followed by female caregivers regardless how they feel about vaccination themselves. “Our husbands follow what our parents teach us. We don’t know whether polio vaccine is good or not and simply follow our parents’ guidance,” said a female caregiver in Baldia U 1. Another female caregiver in Baldia UC 1 who had worked on a polio team herself, said that she “tried my level best to make my family understand but they don’t;” as a result, she does not vaccinate her children.

Frontline workers (FLWs) in Gulberg UC 8 said that in their experience, some families also consult doctors. FLWs in Gadap UC 5 said that male caregivers follow someone’s opinion more if the person has a beard, and a single house is enough to turn the entire area into refusers.

3.4 Repeated Campaigns

FLWs reported that majority of refusals are caused by frequent campaign visits. “Some people used to allow vaccination, but now refuse due to frequent campaigns. Even if the frequency decreases, they won’t allow their children to be vaccinated anymore,” said a caregiver in Orangi UC 1.

Almost all caregivers have expressed their strong annoyance with the frequent vaccination campaigns and explained that such repetition creates doubts about the reasons for such frequent visits, vaccinators and vaccines or their ingredients. “After every 3 days, the team of polio vaccination come in our houses for vaccination,” said a male caregiver in Gadap UC 5. “People are getting mentally tortured by this program... They should just stop this campaign,” said a female caregiver in Baldia UC 2. “Once in six months was fine and we used to let our children get the vaccine but the current method isn’t right,” said a male caregiver in Baldia UC 3.

Caregivers are also unhappy with the fact that vaccinators contact them in a wide variety of places: in parks, at hospitals, at check points, on the street or at school. “We were at a safari park on Eid; I fell asleep and after I woke up, I saw that vaccinators have given polio drops to my son; they didn’t even ask me,” said a male caregiver in Gadap UC 4.

Many caregivers such male caregivers in Gadap UCs 4 and 5 feel that polio vaccinators should not visit more than once a month or even less frequently. For example, female caregivers in Baldia UC 2 preferred quarterly visits – even though they explain that as long as their husbands prohibit vaccination, nothing would change.

Resentment toward the frequent campaign visits was also reported by the FLWs; all groups of FLWs interviewed said that many refusals are caused by people’s irritation and even anger with constant campaign visits. “There is not enough gap between consecutive campaigns,” said FLW working in Baldia UC 1. FLWs also felt that many caregivers feel increasingly suspicious about the reasons for polio vaccination and the effectiveness of the vaccine as a result of frequent door knocks.

Caregivers also worry about the impact that multiple rounds of vaccination might have on their children's health, reasoning that so much vaccine cannot be good. Some caregivers have complained that vaccinators give 4-5 drops of polio vaccine instead of two. "If you try to draw blood from our children, you'll have polio drops – that's how much vaccination they get," said a male caregiver in Gadap UC 4.

Some caregivers in Gadap UC8 and Orangi UC 7 have also complained about lack of scheduled time for vaccination; they noted that in the past, there used to be a schedule for vaccinations announced publically, but it does not happen anymore.

3.5 Destructive Rumors

Multiple female caregivers said they used to let their children be vaccinated: "Before these rumors, our kids used to be vaccinated, but now many people have turned against vaccination," said a female caregiver in Baldia UC 3. A male caregiver in Baldia UC 3 said something similar: "We have never seen any harms of the other vaccines, but have heard and seen harms being done by the polio vaccine."

Almost all areas include caregivers who have personal experiences or close relatives or friends whose child had allegedly been paralyzed or died as a result of polio vaccination. For example, a female caregiver in Baldia UC 2 said that she "knows a case when despite being vaccinated regularly, a child got polio – he has a limp." Similarly, in Gadap UC 5, a male caregiver said that in 2008, a polio team in Korangi vaccinated a child even though he had a fever, and the child died that night. A FLW remembered a case in Liyari, Gadap UC 5 when a child died after polio vaccination.

"There was a child whose legs stopped working after polio vaccination. My parents live in that area and told me to not give polio vaccines to our children," said a female caregiver in Gadap UC 4. Another female caregiver in Gadap UC 4 said, "After vaccination from polio, my cousin's hands stopped working." One of the female HRMPs in Gadap UC 5 said that polio vaccine caused polio to her son and eventually killed him, even though she does acknowledge she's not sure if the vaccines given to her son included polio vaccine or not. In Landhi UC 1, caregivers explained that a 3-month old child was vaccinated and developed polio. A female caregiver in Gadap UC 4 explained that after being vaccinated, her child became ill and had to have fluids drained from his spinal cord. "After that, all my relatives stopped taking vaccine for their children."

Large numbers of refusers attribute their decision to not permit polio vaccination to the claim that polio vaccine is haram. Explanations why the vaccine is haram include:

- The vaccine includes haram ingredients: urine – typically, monkey's urine (Baldia UC 1 and 2, Gadap UC 5, Gulshan UC 13), monkey's kidney (Baldi UC 1, Gadap UC 4), monkey' blood (Baldia UC 2), urine of monkeys and Americans (Site UC 9), pig's fat (Gadap UC 8, Orangi UC 1) or pig's blood (Site UC 9);
- The vaccine causes infertility or reduces the number of children a person can have (all areas)
- The vaccine prevents women to give birth naturally – increases the likelihood of Caesarian (multiple areas)
- It's made in non-believer countries such as America, Israel or India (the latter was reported only in Site UC 9); "People say that polio vaccine is an invention of Western countries (nonbelievers) so it might contain haram ingredients," said a male caregiver in Gadap UC 5

- The vaccinators are not able to tell the ingredients of the vaccine (almost all areas): “In November 2005, I saw test reports from Sindh Jamya laboratory - one of the biggest laboratories in Karachi; they haven’t been able to tell how the vaccine was created and what ingredients it contains,” said a male caregiver in Gadap UC 5.
- The vaccine has not been tested in Pakistan (almost all areas);
- Religious leaders and doctors are not able to tell people if the vaccine is haram or halal. “Some religious scholars say that the vaccine is halal, while some others – that it’s haram” (female caregiver, Landhi UC 1)

A FLW in Gadap UC 5 has heard the refusers explain that there are 2 types of vaccines- “for Muslims and for non-Muslims. The Muslim countries, vaccine has an activated virus and to make them multiply, the vaccine is kept in bacteria, while in the non-Muslims countries, the vaccine is kept in the lungs of the monkeys to make it grow fast. The vaccines for the Muslims have a mark on them with a list of ingredients and the vaccines for non-Muslims also mention the monkey’s lungs.”

Many male and female caregivers fear that vaccination will make their children infertile. With some variations, such rumors are spread through all areas. In some cases, the rumor is that the vaccine will cause a full infertility, while in others – that it will severely reduce the number of children one is able to have. “I had nine children, but my daughter has been able to have only two...she asked me if it’s because I had her vaccinated from polio...”said a female caregiver in Baldia UC 2. Yet another variation of the rumor is that the vaccine causes males to have only female offspring (Baldia UC 1) and prevents females from having natural childbirth (multiple areas).

Another group of rumors pertains to the claim that polio vaccine causes changes in a child’s behavior. Some caregivers believe that their children became hyper and stubborn after vaccination, more inclined to immorality and adultery, and similar. Additionally, caregivers believe that the polio vaccine causes premature puberty (Baldia UC 2, Gulberg UC 8 and Orangi UC 7, among others).

A FLW in Gadap UC 4 noted that Pashtuns believe that polio vaccination destroys their children and try to save at least one child from vaccination – most likely so that they can have grandchildren from at least one child.

3.6 Misconceptions

Misconceptions can be grouped into several major categories: advice from doctors, past personal experience and conspiracy theories.

Almost in every UC, caregivers have reported that some doctors advise them against polio vaccination. For example, a resident in Gadap UC 8 explained that a doctor with more than 30 years of experience has told them that there is no proper evidence available about the efficacy of the vaccine. FLWs in Site UC 9, Baldia UC 1 and Gulberg UC 8 have noted that family doctors and doctors from the Agha Khan Hospital advise caregivers against polio vaccine. Similarly, a resident of Orangi UC 1 said that a doctor at Jinnah hospital told him not to vaccinate his child.

In a variation of the medical theme, some caregivers across the communities believe that vaccines are being mishandled by vaccinators and become poisonous: A male caregiver in Gadap UC 5 said that “sunlight damages the polio drops and makes them harmful.” Male caregivers in Orangi UC 7 claimed

that they have caught vaccinators using expired vaccine. Respondents from Gadap UC 5 noted that vaccines should be kept in ice boxes but they haven't seen any of the vaccinators do so. A female caregiver in Gadap UC 4 wondered, "if the vaccine is valuable, it would be expensive and the parents would pay the vaccinator, why are they providing polio vaccines free and more than 6 times a month?"

Past personal experience mostly revolves around the belief that "We've never had polio drops and never got sick, so why give them to our children" (caregivers in Gadap UC 4 and 5). On the other hand, some caregivers believe that polio vaccination cannot help in the environment they live: "In Karachi, nobody gets clean water; when so many germs get into the child's body, how can a drop of polio prevent them from getting ill?" said a female caregiver in Baldia UC 3.

Notably, some females in Baldia UC 1 had given polio vaccination to their older children and never witnessed any illness from it but still does not allow their youngest children to be vaccinated. "We tell polio teams that we don't have kids and they go away," said a female caregiver in Baldia UC 1.

3.6.1 CONSPIRACY THEORIES

Vast majority of communities harbor at least one conspiracy theory whereby the vaccinators are spies or might be sent by their enemies to kill them: "Vaccination team volunteers that go from house-to-house for vaccination, must be agents," says a caregiver in Orangi UC 1. Another caregiver theorized that "Anyone can come to my house and claim that they are from the polio vaccination team; how would I know if they are from the vaccination team or a fraud poisoning my child."

Another group of theories claim that the vaccine is part of a conspiracy by non-believers to dramatically reduce Pakistan's (or Pashtun) population. The misconception that vaccine has been made in the United States –or another "non-believer" country and therefore bad for Pakistanis is circulating in at least 10 out of 13 target Union Councils.

Communities speculate that the polio vaccine is haram for Muslims due to its place of origin since it includes haram ingredients. For example, caregivers in Baldia UC 1 believe that polio campaigns are being conducted as an effort to reduce the size of Pakistan's population in replacement of the failed birth control campaigns. Similarly, residents of Site UC 9 explained their suspicions by the fact that previously, NGOs used to advocate for fewer children, and now they are focusing on polio; residents of Gulshan UC 10 also suspect that the real reason for vaccinations is birth control.

Majority of communities believe that the Americans have added ingredients (such as birth control pills) to the vaccine to cause infertility among Pashtuns – because Americans don't like Pashtuns and want to stop them from reproducing and growing in numbers (Baldia UC 1, Gadap UCs 4 and 5, Gulshan UC 13 and Orangi UC 7); that it's mostly given to the poor people's children. A male caregiver in Gadap UC 8 reasoned the following way: "NGOs belong to America, so America is running that all system."

Members of Gadap UC 8 have also pointed out that Shakel Afridi has been shot – perhaps as a proof that the vaccine is bad. Members of Gadap UC 5 reasoned that when Americans are killing Muslims, why would they want to save Muslims from polio: "they poison our children through polio drops to paralyze them". Members of Orangi UC7 noted that polio vaccines are administered only in Pashtun areas to explain their theory of anti-Pashtun conspiracy.

Meanwhile respondents in Site UC 9 asked why NGOs are so concerned with their health. In this UC, a former vaccinator explained that they have started refusing polio vaccination after hearing that the vaccine is made in India (therefore it must be haram).

Many caregivers have heard about vaccinators being killed and speculate that these vaccinators must have been doing something wrong, therefore there must be something wrong with polio vaccine.

3.7 Direct Refusals

Direct refusals are most frequently attributed to doubts about vaccinators. Females in Baldia UC 1 felt that Pashtoon refuse more than other people because “they don’t know what it is, so they simply refuse.”

Many male caregivers said that they don’t allow their children to be vaccinated in fear that they’d get ill – they feel they won’t be able to afford to take the child to hospital; the male refusers also fear that in the absence of health facilities in their area, the trip to the clinic will lose them a full day’s earnings. Such sentiments were expressed in Baldia UCs 1,2 and 3.

One of the residents of Baldia UC 2 said, “When campaigns begin, we lock our doors because we don’t want to vaccinate our child.”

Other reasons for refusal include general frustration that the government does not provide any facilities or support to address other illnesses or problems in the refuser communities; exclusive focus on polio raises doubts and irritation. “There’s so much garbage in the area. Children touch that garbage, then eat with dirty hands and get sick,” female caregiver, Gadap UC 4. Such frustration was expressed in Baldia UC 2, Gadap UC 4, 5 and 8, Gulberg UC 8, Landhi UC 1 and Site UC 9. Refusers living in Orangi UC 7 noted that there are many areas in their UC where drugs are being used, and the area is too dirty.

In Baldia UC 3, female caregivers explained that with all the drugs, crime and lack of infrastructure around, polio is the least of their worries.

One of the FLWs in Gadap UC 4 said that majority of her refusals are due to the murder of Naquib Ullah Mehsood: “They say your security killed such a noble person. We won’t cooperate with you.”

3.8 Religious Refusals

Even though caregivers claim that they would accept the statement from a religious scholar that the vaccine is good, many of them start retracting from the statement almost immediately. They also not change in the position among the religious scholars: “Before 2008, all aalims were telling everyone not to give polio vaccine to children so we obeyed them; after that, corrupt aalims started saying that it’s halal,” said a male caregiver in Gadap UC 8.

Other caregivers, including those in Gulberg UC 8 said that religious scholars don’t talk much about polio; those from Site UC 9 and Gulshan UC 13 have said that religious scholars are split in their opinion whether the vaccine is halal or haram or simply admit they don’t know and suggest to ask doctors to have the vaccine tested.

FLWs in Gadap UC 4 and 5 noted that their local imams are against vaccination and even if religious scholars support polio vaccination, caregivers refuse to believe them. “Even Maulana Tariq Jameel said the vaccine is halal, but parents don’t listen.” – FLW in Gadap UC 4. This is also the case with some male caregivers in Baldia UC 3. Meanwhile, FLWs in Site UC 9 and Orangi UC 1 reported that religious scholars tell communities that the vaccine contains haram ingredients.

A female caregiver in Baldia UC 2 explained the following: “Vaccinators showed me a book of Fatwa, telling me to check how many Molvis have given fatwa on polio... All these Molvis must have taken big amounts for giving fatwa on it ...”

Many refusers make their decision against vaccination on religious grounds, claiming that a child’s health is in God’s hands, and with strong faith, the child will remain healthy and strong. For example, a female caregiver in Baldia UC 3 said that her “baby cousin got polio and died; his mother didn’t let him get vaccinated and now she also prohibits her grandkids to be vaccinated saying it’s all in God’s hands.”

One of the FLWs in Site UC 9 noted that in her area, all refusers are Kala Dacca in Peshawar and refuse on religious grounds no matter how FLWs try to convince them.

3.9 Sickness

“We are confused whether to have vaccination or not, and afraid of the potential damage because so many people speak against it, while others lobby for it,” said a female caregiver in Baldia UC 1. Another added: “If after vaccination children fall ill, who will provide us money to get them treated?” female caregiver, Baldia UC 2.

Numerous caregivers in Gadap UC 4 and other target areas said their children have gotten sick after vaccination. Caregivers in Baldia UC 2, Gulberg UC 8, Orangi UC 1 and 7 said that after vaccination, children develop fever. “Once, I let my daughter take polio drops; she got severely ill,” said female caregiver in Baldia UC 3. One of the caregivers in Gulshan UC 10 said their child developed fever and chest infection; in Landhi UC 1 – vomiting, diarrhea and dark spots on the body, while a resident of Baldia UC 1 said their child developed kidney failure and lung infection.

Additionally, FLWs report that caregivers complain to them that after vaccination, children have developed a chest infection and skin allergy (in Gadap UC 5), stomach pain and diarrhea (Site UC 9) and fever (Orangi UC 1). Meanwhile female HRMPs in Gulshan UC 13 said that there are a lot of powerful men who tell them not to vaccinate children to protect their brain.

FLWs note that in some cases, they cause such complaints due to their own oversight: “Some parents complain of our own mistake - if we touch the dropper without washing our hands, the child gets diarrhea. We don’t tell the parents about it but try to be more careful,” said a FLW in Baldia UC 1.

3.10 Other Reasons for Refusal

3.11 Sources of Misinformation

A FLW in Gadap 5 noted: “Among all the channels, only PTV shows material in favor of the polio campaign.”

Almost all refuser groups have seen – or heard of - videos against polio vaccines – in Baldia UCs 1, 2 and 3, Gadap UC 4, Gulshan UC 13, Landi UC 1, Orangi UC 1 and Site UC 9. Most of the refusers also refer to newspaper Umat which has published an anti-polio article, news channels (Orangi UC 7) or a show of Amir Liaqat against vaccination on Bol TV (Baldia UC 3). Umat newspaper apparently had an article saying that a girl has died after taking polio vaccine. Some male caregivers in Gadap UC 4 also mentioned a video made by Sarayaam team from ARY TV. “We are scared of giving polio drops to our kids because we see videos on social websites or on TV,” said a female caregiver in Baldia UC 3.

Caregivers have explained that women share news with one another when they go out– such as about a child’s death from polio vaccination in Baldia UC 2 or in Landhi UC 1. In Baldia UC 3, rumors that polio vaccination causes infertility and premature puberty are spread by a man who makes biryani for living in the area.

In Gulshan UC 10, neighbors and friends inform one another that the vaccine is not good as it contains haram ingredients. “All our neighbors think that polio vaccine will harm children,” said a female caregiver in Baldia UC 1.

“If the news was wrong, the government would have took action against them because they are spending a lot of money on polio vaccines. Why didn’t they take action towards the news?” said a male caregiver in Gadap UC 5.

All FLWs confirm that as soon as one community member hears any such information, they tell all their friends and neighbors, and soon, the entire community knows about it.

3.12 Trust in Vaccinators

3.12.1 FLW PERCEPTION OF REFUSERS’ TRUST

FLW feel that at least 70% of the community members, and a lot of the refusers trust them, even though none of the refusers welcome them to talk about the vaccine or polio. FLWs in Gadap UC 4 have told the moderator that refusers’ trust has improved lately, but not enough. FLWs said that the refusers in Gadap UC 4 trust their local doctors, while refusers in Site UC 9 don’t trust neither the public nor private doctors. “In community, even refusers are very nice to us, but ask not to vaccinate children because their husbands would beat them otherwise.” FLW, Baldia UC 1. FLWs in Gadap UC 4 note that “sometimes when ladies open the door, we get a good response but on Saturdays or Sundays, when

men are home, we have problems.” Another FLW in Gadap UC 4 noted that, “one good thing about Pathans is that they respect the women; ladies do misbehave, but men don’t.”

FLWs in Baldia UC 1 do get asked if they work for Americans or Jews and even have to recite Kalma to show that they are Muslims. “There are a few refuser families who don’t trust us; they will never trust us no matter what we do.” FLW, Baldia UC 1. “When we knock at the refuser’s door, they respond after the 3-4 knocks and say that there are no children; we get it that they don’t agree to vaccination. We tell them that we won’t vaccinate but want to tell a few points but they scold us and sometimes use swear words.”

“We tell them that the vaccine is made in Pakistan, but they call us liars.” FLW, Baldia UC 1. “We tell them in detail how the vaccine is made when they say that the vaccine is haram, but they don’t believe or tell us to vaccinate only girls.”

FLWs reported that in one of the areas of Gadap UC 4, a woman hit one of the FLWs, and when the monitor went to check the report, this woman accused him to have broken the door and tore clothes off her daughter.”

“Some polio team workers are older mothers who go out in their usual attire...So caregivers object to their appearance and judge them as being not knowledgeable.” FLW, Gadap UC 4.

3.12.2 CAREGIVERS’ PERCEPTION OF VACCINATORS

Majority of caregivers, especially male ones, who are refusers have reported that their trust in vaccinators is very low. Caregivers at 8 target UCs out of 13 (all except for Baldia UCs 1, 2 and 3, Gulberg UC 8 and Gulshan UC 13) have expressed their frustration with vaccinators. Respondents from Orangi UC 1 had an especially long list of complaints.

Multiple respondents have complained that vaccinators show up with the police and rangers and forcefully vaccinate children (Gadap UC 4 and 8, Orangi UC 1), force parents to wake up their children from the sleep and force vaccination on them (Orangi UC 1) or vaccinate children older than five years of age (Orangi UC 1). Both male and female caregivers explained that bringing police to the house “causes great dishonor to our husbands and family.”

“They hire street hooligans to scare and force us to vaccinate our child,” said a male caregiver in Gadap UC 5.

Additionally, multiple groups of respondents (again mostly male) felt that vaccinators are not clean – that their nails are long and dirty, hands are dirty (Gadap UC 5 and 8, Orangi UC 1). “The polio staff are very dirty types and behave weirdly; just yesterday they caught a child on the street and gave him the vaccine,” said a male caregiver in Gadap UC 4. Orangi UC 1 residents have also complained that vaccinators are ill-mannered – they enter the house without asking for permission. “I saw a vaccinator chewing paan with paan juice dripping from his lips that was disgusting, how we can vaccinate our child from these kinds of unhygienic vaccinators,” said a male caregiver in Gadap UC 5. “Ladies come while they are having menstrual problems. This is not appropriate,” said a male caregiver in Gadap UC 5.

Residents of Gulshan UC 10, Landhi UC 1, Orangi UC 1 and Site UC 9 felt that vaccinators are not educated enough and don’t know about the vaccine or its ingredients (the latter complaint was also expressed in Gadap UC 8). Residents of Orangi UC 1 have also noted that vaccinators don’t know how to

handle vaccines - that they keep vaccines in a bag rather than cold box and give multiple drops. The latter complaint was also expressed in Site UC 9, Gadap UC 8 and Orangi UC 7.

Many male refusers complained that polio workers do not provide information: “Nobody has any information about polio vaccination and its ingredients. I can’t even ask the volunteer’s name or why they are vaccinating my child - they get annoyed and reply rudely “let me do my job,” – Gadap UC 5, male. Similarly, a female caregiver in Baldia UC 1 noted: “They never make us understand properly or try to convince us about polio; they just ask to give drops and when we refuse, they immediately go away.”

Residents of Orangi UC 1 explained that their community started doubting their vaccinators after a polio vaccinator referred parents to take their child for IPV; after that, the child could not walk for a few days. Residents of Site UC 9 explained that their trust in vaccinators and vaccines wavered after a vaccinator got killed in the area.

It also seems that lack of trust stems from the fact that none of the vaccinators are Pashtuns, while majority of the refusers are Pashtuns; refusers are reluctant to trust vaccinators from other communities because they don’t know the vaccinators. “How would I trust an unknown person coming to my house for vaccination?” male caregivers in Gadap UCs 5 and 8. A similar sentiment was expressed by a female caregiver in Baldia UC 1 who added, “They are from different area and different culture.”

Participants from Gadap UC 8 explained their lack of trust in the following way: “Vaccinators don’t take any responsibility for the vaccine. If a child dies after vaccination, who will be answerable? Where will we find vaccinators?”

On the other hand, caregivers in Baldia UCs 1-3 tend to be kinder toward vaccinators; several of them have mentioned they know vaccinators personally: “they are women like us and do hard work so I feel happy when I meet them.” Female caregiver, Baldia UC 2. They find FWLs well-mannered and polite and add that they don’t open the door if a male polio worker comes to avoid upsetting their husbands. One of the female caregivers in Baldia UC 2 even keeps polio vaccines in her fridge for the vaccinator: “I won’t throw out her polio drops just because I don’t vaccinate my children... I don’t vaccinate my children but others do...”

Female caregivers in Gadap UC 4 said that some of the Sehat Muhafiz are Pashtuns. Meanwhile male caregivers in Gadap UC 8 said that all vaccinators are outsiders, and therefore should not be trusted.

3.12.3 ATTITUDE TOWARD FRONTLINE WORKERS BY CAREGIVERS

Many FLWs noted that most of the time, they are welcomed by the refuser households as long as they don’t ask to vaccinate the children or talk about polio (in Site UC 9, Baldia UC 1, Gulberg UC 8 and Orangi UC 1). Despite the generally friendly welcome, some parents ask frontline workers to leave and shut the door in front of them, especially when people get annoyed with repeated campaign visits. “Caregivers say they’d rather let the child die than get them vaccinated,” – FWG, Gadap UC 4.

FLWs visiting refuser households in Gadap UCs 4 and 5 noted that they are mostly met with anger. Many caregivers shout and even curse them, don’t open the door or ask to leave. A male caregiver in Baldia UC 3 admitted, “We say vile things to the vaccinators, such as, never come here again.” One of the FLWs said that a woman pulled out a knife and threatened her.

Many families ask vaccinators to show proof that the vaccine is halal and ask about its ingredients.

3.13 FLW Motivation

All FLWs seem to be driven by the noble purpose of their job, and do not lack motivation. They feel very happy, proud and committed about working to eliminate polio in Pakistan. They feel it's their responsibility as well as passion. "I feel so good that I work for a good cause - making the country free of polio," said a FLW in Baldia UC 1.

"My father said that not only does this job serve the people but I'd be an example for the new generation of Pashtun girls who typically don't leave their homes," said a FLW in Orangi UC 1.

Multiple FLWs including those in Gadap UC 5 and Orangi UC 1 reported enjoying their job because "the salary is good, we live in this area and look after it well – and don't need to go anywhere else."

A FLW in Gadap UC 4 noted that she dislikes not being able to help refusers with their environment, but has heard that cleaning of garbage from the area is about to begin. FLWs are waiting for this to happen so that refusers can see that something is being done in their area. FLWs also feel disheartened when they're not able to convince refusers: "it makes us feel bad that these two drops can save their children but we are unable to do anything for them."

At the same time, FLWs named several ways to support and increase their motivation. FLWs are eager to receive acknowledgement for their work. In Gadap UC 4 and 5, FLWs would be happy to receive certificates and awards in recognition for their work, while in Gadap UC 4, they'd also love to be acknowledged through the media: "The morning shows should discuss how the workers in Gadap town are working hard."

Another FLW in Gadap UC 5 said it would be great to have a medical facility with medicines for the people, so that FLWs could introduce themselves proudly as government representatives, while others some FLWs already feel that the community looks at them as government representatives.

FLWs in Gadap UC 4 would like to have uniforms – a special jacket or shirt over their clothes, gloves and shoes to indicate to the community that they are professionals.

3.14 FLW Training

FLWs reported having been trained well to answer all queries and to behave politely regardless of the attitude of the caregivers. None of them knew anything about polio or vaccination at the beginning, but over time have learned a lot. FLWs say that all parents ask the same questions, and they know enough to answer well – but if the parents don't want to believe them, nothing helps. "It seems that all the refusers sit together and plan the questions to ask." FLW, Baldia UC 1.

FLWs in Baldia UC 1 noted that the quality and frequency of training for polio frontline workers should be increased in order to improve their work, while FLWs in Gadap UC 5 would appreciate if training could be arranged in a good environment. FLWs in Gadap UC 4 would like to be trained by doctors and in different circumstances than they usually do.

3.15 Efforts to Convince the Caregivers

FLWs use a wide variety approaches to persuade caregivers to vaccinate their children, depending on the reasons for refusals. FLWs explained that each refuser is different: some are convinced through doctors, some - through the religious leaders, while others believe pamphlets from doctors or the Fatwa books. “A while ago, there was a grandmother who did not allow to vaccinate her grandson. I visited her for 1.5 years, took many Islamic scholars and doctors – and finally, she agreed,” said a FLW in Baldia UC 1.

To address destructive rumors and religious reasons, FLWs show Fatwa Book and lab reports to parents (this method was named by FLWs in Gadap UC 4, Gulberg UC 8 and Orangi UC 1). Some FLWs have warned that most of the time, it does not make much impact. To convince those who have seen the video, FLWs talk about the fact that both good and bad things are placed on internet, appeal to the refusers’ sense of religion and remind that the Saudi Government has made it mandatory for the passengers to drink these drops before entering their country.

When caregivers complain about sickness (such as the chest infection, diarrhea, fever or boils) that polio vaccine causes, FLWs in Gadap UC 5 reason with the caregivers in the following way: “Out of 4,000-5,000 children that we have vaccinated, what is the reason that only your child has become sick?” This way, refusers slowly get convinced. Sometimes, FLWs even take polio drops themselves: “Some mothers make us take polio drops and only then allow us to vaccinate their child. They worry that it’s a poison,” said a FLW in Baldia UC 1.

To address misconceptions, FLWs use opinion leaders, such as Innayat Barki and Muhammad Anis Khan in Gadap UC 5. Some FLWs take doctors with them and answer numerous questions about polio and the vaccine. One of the FLWs in Gadap UC 4 said that in some cases, she took the prescription from refusing mothers and brought them free medicines through a reference from my sister who works in a pharmacy. This has turned their refusal into acceptance.” Several other FLWs confirmed that their refusers are very fond of free medications.

FLWs first try to convince refusers themselves, then bring their supervisor, next – a respectable person from the area. FLWs in Gulshat UC 8 organize community engagement sessions with local doctors, molvis and polio campaign staff to give awareness to the male and female caregivers on polio vaccination and its benefits.

3.16 High-Risk Mobile Persons (HRMPs)

3.16.1 TRAVEL PATTERNS

HRMPs hail from and travel to Balochistan (Quetta, Zhob, Chaman, Pishin, Kuzdar), Sindh (Shikarpur, Tana Bola Khan), FATA (South Waziristan, Bajaur, Khyber, Mohmand), Khyber Pakhtunkhwa (Mardan, Kohat, Peshawar, Kalam, Swat, Hwazakhela), Afghanistan (Mazar Sharif). Two types of travel have been

reported –for 2-7 months and for 6-8 days. Vast majority of HRMPs travel between these location and Karachi by bus (from Sohrab Goth Station), some travel by car or train part of the way.

When families travel with children, the children mostly get nausea or diarrhea; many families take medication from these ailments with them. A male HRMP in Orangi UC 13 said that when children develop stomach pain during their trip, they take the child to a private doctor.

3.16.2 VACCINATION

Many HRMPs noted that when they go through check posts and border crossings, their children get vaccinated each time; HRMPs in Gadap UC 5 said that staff at check posts ask whether children are vaccinated. Caregivers also noted that in many of the destination areas, vaccination is not offered.

Some HRMPs who are refusers said their children get vaccinated during vaccination campaigns, others admit that they refuse vaccination. Many of them reported that polio vaccinators always ask if they have guests with children and offer vaccination; some families refuse to vaccinate their guests' children as they feel it's a great insult to force vaccination on their guests, while others let the guests' children be vaccinated. A female HRMP in Gulshan UC 13 said that the children of their guests don't get vaccinated anywhere – neither in their own homes nor during their visit.

HRMPs' perceptions, knowledge and attitudes toward polio vaccination or vaccinators are very similar if not identical to those of settled refusers. The only major departure from the answers of the settled caregivers was the complaint that marks on the children's fingers don't last very long, and as a result, children get vaccinated again at school, which, HRMPs feel, is too much vaccination. Such complaint was expressed in Orangi UC 13. Similarly, HRMPs in Gadap UC 4 said fingermarks should be made more permanent.

3.16.3 HEALTH SEEKING BEHAVIORS

Majority of interviewed HRMPs said that they take their children to doctors and health facilities when their children become sick. Depending on their income level, they chose either public or private facilities.

When children get sick, HRMPs in Landhi UC 1 take them to private health clinics; Hassan hospital Malir, Jinnah hospital, hospitals in Kalaboard and Nazimabad were named by male HRMPs in Landhi UC 1. Male HRMPs in Landhi UC 1 also have positive views of their vaccinators who, according to HRMPs, are their local teachers living in the area.

Multiple male HRMPs in Landhi UC 1 have children who are paralyzed (suffering from polio) or know about such children living in their area. These caregivers have explained that once paralysis is detected, parents take the child to the health care facility; doctors give medication and parents give polio vaccine, but they haven't seen any improvement. The HRMPs admit these children haven't been vaccinated from polio. HRMPs explain that children got paralyzed because of the dirt in the area and dirty water for the paralysis.

At least one male HRMP in Landhi UC 1 has said that they did not believe in polio vaccines before, but now they do. Another male HRMP in Landhi UC 1 said he'd read an anti-polio vaccination article in Ummat Newspaper, but then someone told him that polio vaccines are very expensive if you have to buy them, and this HRMP allowed to vaccinate his children again.

Interestingly, most of male HRMPs in Landhi UC 1, even though they were being interviewed as refusers, claimed to permit and support polio vaccination, and claimed that their wives or other people in the area are against polio vaccination because they fear it may cause infertility or other harm (same as among the settled refusers).

3.17 Finger-Marking

Several female caregivers in Baldia UC 2 said that they'd asked vaccinators not to mark children's fingers after vaccination to avoid their husbands from finding out about it or to avoid older children from being seen with markings on their fingers. "The vaccinator asked to write on the wall of the house if I want to give polio drops secretly to my child," said a female caregiver in Baldia UC 2.

On the other hand, female caregivers in Baldia UC 3 and Gadap UC 4 said have asked vaccinators to mark the child's finger without administering the vaccine but the vaccinators refused to do so and offered to vaccinate the child without marking the finger instead. FLWs have confirmed that they oftentimes forgo marking of the children's fingers to save the wives who want to vaccinate their children from their husbands' anger. Some FLWs offer to mark other, less visible places on the child's body: "This mark can be placed on a toe or behind the ear if anyone have a problem, so that the rest of the family is unaware of the mark," said a FLW in Gadap UC 5. "When the parents don't allow to mark a child's finger, we enter information on the wall chalking," said FLWs in Baldia UC 1 and Gadap UC 5.

At the same time, FLWs in Gadap UC 5 admitted that occasionally, they forget to mark fingers of the children they'd vaccinated, explaining that they vaccinate so many children, and sometimes it slips their mind.

In contract to the statements by female caregivers and FLWs, male caregivers in Site UC 9 said that usually vaccinators offer to mark fingers without administering vaccination and instruct the parent to tell other members of the polio team that the child has been vaccinated. Notably, caregivers in this group also said that they had tested Pepsi Cola and Coca Cola at Agha Khan Hospital, and found that the two drinks contain 10% alcohol in them, as well as that those who give polio drops instead of injection would get 3 years of prison.

In addition to the above-discussed finger-marking practices, a female caregiver in Baldia UC 1 and another in Site UC 9 said that they mark the children's fingers themselves to avoid vaccination, and when the next vaccination team comes, "I tell them that your team has given it a couple of days ago".

3.18 Ways to Change Perceptions on Vaccination

3.18.1 CAREGIVERS' SUGGESTIONS

Caregivers in all target UCs have offered multiple suggestions how community doubts about polio vaccination can be addressed so that caregivers could be convinced to accept polio vaccination for their children.

Females have insisted that if their husbands and in-laws can be convinced that polio vaccines are good for their children, then they would no longer refuse vaccination. Female caregivers suggested to engage religious scholars in changing perceptions and attitudes, and to promote vaccination at mosques. “Religious scholars should be used to create awareness to our husbands and in-laws that this vaccine is Halal,” said a female caregiver in Gadap UC 5. In Orangi UC 1, female caregivers suggested that husbands should be convinced at Jirga by community elders.

Vast majority of caregivers asked that polio teams should come less frequently: “They should come once a month to give vaccine and shouldn’t bring 500 people to us as they do now,” said a male caregiver in Gadap UC 4.

Multiple groups of caregivers suggested to improve information availability:

- The Government should reassure people that the vaccine is halal. “They should show on TV that big people like politicians give polio vaccine to their children so that we don’t think it’s bad,” said a male caregiver in Gadap UC 4.
- Polio teams must assure people that the vaccine will not cause infertility or any other disease.
- Vaccinators should show papers signed by the Army Chief and the PM that it’s halal and won’t affect child's health.
- The vaccine should be tested to ensure there are no haram ingredients and that it has not expired
- Religious leaders should endorse the vaccine: “The government should test polio samples and after research there should be council of Ulema of every sect where they would issue a fatwa and declare whether it is halal or haram and suitable,” said a male caregiver in Gadap UC 5. Similarly, male caregivers in Gadap UC 8 said they’d accept polio vaccination if Ulmail Karam accepts it and announces it halal.
- Conduct an awareness session for parents. “If they gather people and build their trust by telling them about chemicals used in the polio vaccine and its benefits, then we’d believe that it is good for our children,” said a male caregiver in Baldia UC 3.

Additionally, many caregivers suggested to engage mass media:

- Government should broadcast polio shows on famous TV channels.
- A video or a TV program should be created and broadcast about polio benefits.
- Information and ads should be placed on social media: “Social media is preferred because everyone uses internet; people only watch dramas and films on TV and our husbands love internet more not their wives,” said a female caregiver in Baldia UC 3.

Many caregivers offered suggestion about vaccinators and their visits:

- Vaccinators should be clean.
- Prior to administering vaccination, children should be checked (some mentioned, by doctors) if they are healthy and can be vaccinated; other parents felt that only children that have been tested to have polio virus should be vaccinated.
- Pashto vaccinators should be used.
- Vaccinators should provide information on polio vaccine, including the list of ingredients, benefits and expiry date;
- Vaccinators should be trained and have knowledge about the vaccine.

Multiple male caregivers have also suggested that the government should build health centers in their area and replace door-to-door vaccination with vaccination at health centres (Orangi UC 1, male HRMPs/settled caregivers at Gadap UC 5). “There should be a medical center or institution here so we would trust and go there to vaccinate our child and if our child gets ill due to the vaccination we would take action against them,” said a male caregiver in Gadap UC 5.

Other suggestions were broader:

- Create proper health areas.
- The government should focus on other issues that make children sick –e.g., clean garbage from the area. (Baldia UC 2)
- The government should help poor people get education for their children (Baldia UC 2)
- The government should help people address basic problems (Gadap UC 4)
- The Government should provide basic facilities such as clean water (Gulberg UC 8)
- Build a private hospital for children (Landhi UC 1)

“No matter they come every month but we will vaccinate only when our problems will be resolved,” said a female caregiver in Baldia UC 2.

3.18.2 SUGGESTIONS OF FLWS

FLWs provided the following suggestions to improve the coverage of polio vaccination in the refuser communities:

- The frequency of polio campaigns and the number of teams that visit households should be reduced (all FLW groups interviewed);
- Awareness efforts:
 - There should be information sessions for male caregivers and the elders;
 - Religious scholars and elders/Jirga should be used to convince husbands and in-laws to allow vaccination of their children;
 - Medical camps should be set up in the target areas to provide information on diseases and vaccines to the communities;
 - Mass media campaigns should be used to create awareness: advertising on media, celebrity endorsements, TV programs with famous doctors and religious scholars, an ad such as Commander Safeguard (to influence children who will convince their parents to vaccinate them), social media campaigns. Real experiences of people should be shared on TV.
 - The benefits of Polio vaccine should be shared in Umat newspaper.
 - A video should be made to counter the damaging claims about the polio vaccine and to change perceptions so that FLWs could show it to the refusers.
- The quality and frequency of trainings for frontline workers should be increased.
- Polio teams should include doctors to build caregivers’ trust.
- Polio vaccinators should include males - sometimes, people listen to males more. (FLW Gadap UC 4)
- Vaccinators should carry with them some minor medications such as syrup from cold to give to caregivers (Gadap UC 4).

4 CONCLUSIONS

Despite – or perhaps because of - the tremendous success in expanding the coverage of polio vaccination across the country, the efforts to eradicate this disease from Pakistan have been stalling lately, with the last pockets of refusals digging their heels infirmly entrenched in their insistence to not vaccinate their children. To eliminate the threat of this crippling disease in these last strongholds of polio virus, polio eradication campaigns have increased the frequency in the areas of refusals; vaccinators teams are spending more and more time trying to address the concerns and worries of the caregivers who do not want to vaccinate their children, and a tremendous amount of knowledge as well as other resources have been dedicated to facilitate the conversion of these last refusals. Yet the numbers of refusals are not shrinking down much, and in some areas, have even started increasing.

This study, conducted by Ipsos in 14 union councils in Karachi that have the highest numbers of refusals, aimed to collect in-depth information on the reasons behind the refusals, understand the concerns and misperceptions fueling them, as well as sources of the information they use to build their beliefs. On the other hand, the study aimed to glean the ways to motivate the frontline workers of the polio eradication campaign, who have been directly tackling refusals in their respective areas of coverage.

The study found a lot of commonalities in the reasons behind refusals, sources of information used, and the chain of reasoning employed in the covered 14 union councils. Even though refuser families vary in their ethnic origins, socio-economic class, income and education level, as well as the mobility, among many other factors, there are some common threads crossing all these groups as far as the refusals to vaccinate children from polio are concerned.

The refusals are mostly conveyed to the vaccinators by female caregivers, but driven mostly by the convictions of male caregivers in the household, or their parents. While female caregivers are exposed to the information and education efforts of polio teams throughout the duration of multiple vaccination campaigns, male caregivers mostly remain immune to these information dissemination efforts as vast majority of the campaign efforts take place while male caregivers are at work; even in those cases when male caregivers are at home, they remain largely unengaged in the effort because vast majority of frontline workers interacting with households are female.

Male caregivers form their opinions in hujras – male gatherings – where issues pertaining to polio vaccination are discussed, and return home with their minds made up. Even if female caregivers would like to vaccinate their children or are open to being persuaded to do so, male caregivers typically do not listen to their wives' opinion and insist on refusing vaccination.

To follow their beliefs that vaccination might be beneficial, some female caregivers allow their children to be vaccinated but ask the vaccinators not to place mark on the child' finger to reduce the possibility that the husband will find out. However, such approach is used by a small minority of female caregivers; majority do not wish to risk the husband's wrath or refuse to engage in deceit, regardless how noble the intention may be.

Vast majority of refusing women note that as soon as their husbands are convinced to allow polio vaccination, they will be happy to oblige.

The small minority of female caregivers who report refusing due to their own convictions, hold the same knowledge and concerns as male refusers.

Majority of refusers claim to know very little to nothing about polio and vaccinations, even though upon deeper probing, many of them admit having heard vaccinators or polio campaigns on TV and posters inform them that polio is a dangerous disease which can cause paralysis and thus cripple a child for life, and polio vaccination must be given to every child under the age of five years to protect them from being affected by the disease. Many female caregivers admit that they've had multiple information sessions delivered to them by polio team, but they claim to forget all their teachings as soon as the information session is over.

Approximately half of the refusers remember seeing polio campaigns on TV or on posters, but majority dismiss those campaigns as being lies. Much fewer refusers have any recollection of the Sehat Muhafiz program, and even fewer know what this program is about.

Vast majority of female and male refusers follow the decision of their elders with regard to polio vaccination – in the case of females, firstly, the opinion of husbands and in-laws, while in the case of males – the opinion of parents or other elders. Other immediate opinion influencers include family, neighbors and friends. Communities share important information through the word of mouth, and this is the main source of information across the 14 union councils. Social media, TV and newspapers are other important sources of information, in that order of preference.

Through these channels, vast majority of the refusers have become exposed to anti-polio vaccination videos disseminated on social media, whether refusers have seen them directly or not. The videos have been viewed on YouTube, Facebook and WhatsApp, and have become a strong tool in reinforcing or spreading refusals. Large numbers of refusers have also read or heard of an anti-polio vaccination article in Ummat newspaper; some communities have also mentioned talk shows on Bol TV and ARY TV that spread anti-polio vaccination propaganda.

Aside from these mass media channels, refusers quote advice by doctors, actions or opinions of local imams- many of whom seem to be refusing polio vaccination to their own children - and neighbors or relatives as forces shaping their opinions on polio vaccination.

Below is the list of reasons for refusals grouped along the six groups of refusals used traditionally by polio campaigns:

- Repeated campaigns:
 - Too many visits: vast majority of refusers and even frontline workers are very irritated and put off by the high frequency of vaccination campaigns. They wish that vaccinators would not keep showing up every couple of days but wait for at least one month between the visits.
 - Too many visitors: similarly, vast majority of refusers are very annoyed with the large numbers of people that keep knocking on their doors. As one caregiver has said, they wish to not keep seeing 500 people at their door every week.
 - Too much vaccine: many caregivers are concerned about the possible impact of such large amounts of vaccine being poured into their children's bodies and worry what consequences it may have on their children in the immediate and more distant future.

The high frequency of visits and large numbers of visitors and vaccines turn many acceptors into refusers and sow doubts in the caregivers' minds about the quality of the vaccinator's work and the vaccine itself, undermining the entire effort. As one of the male caregivers has said, at least

they should tell people how many rounds of vaccination they are to endure, so that they would be prepared. This perception is spread across all areas.

- Destructive rumors:
 - The vaccine causes polio (almost all areas)
 - The vaccine includes haram ingredients – urine, monkey’s organs and blood or pig’s fat or blood. Different areas report different ingredients, but all or most of them seem to stem from the videos on the social media.
 - The vaccine causes infertility or reduces the number of children a person can have (all areas)
 - The vaccine prevents women to give birth naturally – increases the likelihood of Caesarian (multiple areas)
 - The vaccine is made in the non-believer countries – and therefore is not good for Muslims (almost all areas)
 - The vaccine has not been tested in Pakistan as there is no laboratory in the country capable of testing it (almost all areas)
 - Nobody can tell the ingredients of the vaccine – therefore it cannot be trusted (almost all areas)
 - Religious scholars and doctors say the vaccine is haram/not good or they can’t tell if the vaccine is good (multiple areas)
 - The vaccine changes the child’s personality – causes disobedience or shyness, inclination toward immorality/adultery, etc. (multiple areas)
- Misconceptions:
 - Doctors are against the polio vaccine (cases in most of the UCs)
 - Vaccinators are not following the protocols for polio vaccination/handling of polio vaccine, therefore the vaccine is not good- expired, spoiled, has turned to poison, etc. (multiple areas)
 - The vaccine must be not good/useless/has no benefits since it’s free and given so many times
 - The older generations have never had polio vaccination and they are fine, so our children will be fine too (multiple areas, with variations)
 - The polio vaccine cannot help in an environment so full of garbage and dirt
 - The vaccine is a conspiracy of the West (America, Jews or India) against Pakistanis/ Pashtuns, and is administered to thwart the growth of Pakistani/ Pashtun people. (all areas, with variations)
- Direct refusals:
 - Fear that vaccination will make children sick when parents cannot afford treatment costs (multiple areas)
 - People don’t know what it is (multiple areas)
 - People don’t trust the vaccinator (multiple areas)
 - People won’t allow vaccination until other problems are also addressed. Issues to be addressed most often include removal of garbage and construction of drinking water plants, along with construction of medical facilities, crime and drugs. (majority of areas)

- Refusers in Gadap UC 4, have been refusing vaccination due to the murder of Naquib Ullah Mehsood.
- Religious: that the vaccine is not approved by religion; this, according to FLWs, is the most difficult type of refusals to change into acceptance
 - A person's health is in God's hands, we cannot interfere
 - Polio vaccination will turn the child away from religion
 - Religious scholars cannot agree if the vaccine is halal or haram, and those who say it's halal are paid by polio teams; the refusers' local imam or other religious authorities of their choice have not affirmed that the vaccine is halal
- Sickness: caregivers are afraid of the potential damage that the polio vaccine may cause to the child's health: The vaccine causes fever, diarrhea, vomiting (majority of areas), or such problems as stomach pain, allergy, eye infection, kidney failure, problems with lungs, dark spots on the body or problems with brain, among others (the latter group of beliefs is held by small groups of caregivers).

The first line of people who handle the above-listed refusals is vaccinators who go door-to-door administering polio vaccination and addressing the concerns of caregivers. Almost all refusers report that they don't trust the information that polio campaign workers, including vaccinators, provide them. Majority of FLW feel that at least 70% of the community members, and a lot of the refusers, trust them, even though none of the refusers welcome them to talk about the vaccine or polio. Meanwhile, majority of refusers, mostly males, have reported that their trust in vaccinators is very low. Refusers complain about a variety of problems with vaccinators: that they are not clean, not polite, not educated and not knowledgeable. Additionally, many refusers complain that the vaccinators bring the police or rangers with them to force vaccination; caregivers perceive it as a great shame to their household and harbor a lot of resentment about it. In some communities, refusers complain that vaccinators are not local or don't belong to their tribe.

The vaccinators are highly motivated to do their job; they feel they are contributing to a noble cause, are able to work close to their home and the salary is not bad. They would enjoy getting awards, certificates, and other recognition, especially references on TV talk shows. They would also like to wear uniforms – shirts, shoes and gloves, and be recognized in communities as government representatives.

The vaccinators truly pour their hearts into their job, taking on the annoyance and abuse to convince the refusers to allow vaccination of their children. They report that it helps to start by identifying the reason behind the refusal and to use the appropriate tool – whether the Fatwa Book, influencers or videos. Sometimes, personal favors in the way of free medicines help, as a lot of refusers are fed up with the excessive focus on polio, while other times, simple persistence works. The vaccinators acknowledge that some of the refusers will never agree to vaccinate no matter what; most of such refusers are highly religious.

After administering polio vaccine, vaccinators mark a finger of the child to signal future vaccinators/monitors that this child has been vaccinated. Sometimes, vaccinators do not mark the child's finger to help the female caregivers avoid the wrath of their husbands. The vaccinated child is entered into the log books, and the vaccinator marks the wall of the house to signal that the house accepts vaccination without marking. Vaccinators typically refuse to mark the child without vaccination, even though male caregivers in one UC have accused the vaccinators of engaging in this practice. In a couple of cases, female caregivers reported marking their child's finger themselves to avoid vaccination, but these cases constitute absolute minority among refusers.

The high-risk mobile persons (HRMPs) is one of the types of refusers. They hail from Afghanistan or areas in Balochistan, FATA, KPK or Sindh, and travel to their home places once or twice a year on average. Some HRMPs stay only a week to 2.5 months, while some others stay up to half a year away from Karachi. Many of them get vaccinated at borders and check posts. Overall, their perceptions and attitudes are mostly identical to those of settled caregivers.

Both caregivers and vaccinators offered a large range of suggestions to improve vaccination coverage. All suggestions center around the lack of information on the vaccine, its benefits and impacts:

- Information efforts: education of husbands, in-laws and mothers, to include religious scholars, doctors and other influencers in direct sessions. To include presentations on vaccine ingredients and Halal/Haram determination.
- Mass media efforts: advertising via TV, information dissemination via social media, TV shows and discussions, including endorsements of GoP that the vaccine is harmless and halal.
- Tools for vaccinators: videos on internet, pamphlets

5 RECOMMENDATIONS

At this junction, the polio eradication campaign must tailor its efforts to the main refusers: male caregivers and in-laws; the campaign should design information activities that address the key reasons for refusal that male caregivers and their parents, especially mothers, uphold.

Particularly, the campaign should educate the caregivers on what polio and polio vaccine is- its ingredients, benefits and potential effects, including fever and other side effects, so that caregivers have a clear idea on what side –effects the vaccine might have. The campaign should be cognizant of the fact that in the absence of information, male caregivers have relied on the publically disseminated videos and articles, while discounting mass media efforts of the campaign. The campaign should also understand that caregivers, especially male caregivers, are not very educated and lack ability to differentiate between various vaccinations and illnesses, and design all information activities at their level of cognition.

Even though majority of caregivers and vaccinators have suggested that the campaign use mass media advertising, it seems to have had less effect than desired. Instead of direct advertising, the campaign should opt for content embedded in programming – movies and programs that highlight polio issues as part of the programming rather than direct advertising. Also, instead of TV, the campaign should focus on social media and articles in Ummat newspaper. The campaign should include testimonials by real polio victims and survivors, religious leaders, doctors, politicians (who must be shown administering polio drops to their children) and other opinion makers.

While female vaccinators have been key to the success of the campaign to date, their role at this stage is less crucial due to the fact that refusals are driven by male caregivers. Female vaccinators should continue playing supportive role to engage female caregivers and provide polio vaccination as well as other minor medications to show the caregivers that their effort is not exclusive to polio. Most importantly, the campaign should revisit its strategy on the frequency of their visits to refuser communities, as the current approach has started backfiring, and many households are now questioning the efficacy of the vaccine and the reasons for such frequent visits.

If resources allow, the campaign should address some of the other problems that the refusers raise – such as removal of garbage from the area or construction of local medical facilities. Even if some of the issues cannot be addressed by polio campaign, the partners of the effort should explore what existing opportunities may be directed to the target areas in order to eliminate the perception that the government does not care about anything except for polio.

It is also important to understand that these refusals to vaccinate are a completely normal to any campaign – each campaign reaches its saturation effort, beyond which each additional gain incurs increasingly high costs upon the effort, and the last few refusals will each cost much more to eliminate than the ones before them. If the campaign is committed and has resources to fund that last mile, then they should also be prepared to bear costs beyond higher than any costs expended per vaccinated child before. At some point, a decision will have to be made if these last refusals must be converted through the use of force (no matter how much it is resented by the refusing caregivers) or left unvaccinated, as the study findings suggest that some of the refusers are simply going from one explanation for refusal to another, and quite likely, that there are no ways to convert them, regardless of what these refusers claim would be a sufficient proof.

6 ANNEX

6.1 Workplan and Timeline for Karachi, January-March 2018

Date	Day	Tasks	Jan	Feb				Mar			Owner
			Wk 4	Wk 1	Wk 2	Wk 3	Wk 4	Wk 1	Wk 2	Wk 3	
26 Jan	Fri	Develop work plan, discuss inception report									Ipsos + UNICEF
30 Jan	Tue	Ipsos meeting with UNICEF in Islamabad									Ipsos + UNICEF
30 Jan	Tue	One-pager for 3 research questionnaires									Ipsos
1 Feb	Thu	Finalize the presentation to NEOC									UNICEF
1 Feb	Thu	Feedback from UNICEF on the one-pagers									UNICEF
5 Feb	Mon	Research tools finalized - HRMP Screening Q/DGs									Ipsos
6 Feb	Tue	Field consultation in Karachi, UNICEF office									Ipsos + UNICEF
7-8 Feb	Wed /Thu	Pretesting of 2 tools (HRMPs + FLW)									Ipsos + UNICEF
7-9 Feb	Wed-Fri	Kashif with DHCSOs prepare execution plan									Ipsos + UNICEF
		Field dates									Ipsos
16 Feb - 2 Mar		Analysis									Ipsos
12 Mar		Report									Ipsos

Note: Plans for other provinces are under development and will include lessons learned from Sindh.