Table of Contents

List of Acronyms and Abbreviations ................................................................. 3
List of Tables and Figures ................................................................................ 4
Background ......................................................................................................... 5
Objectives of the baseline survey ................................................................. 5
Survey methodology ......................................................................................... 6
Site Selection ..................................................................................................... 6
Data collection methods and tools ................................................................. 6
Data entry and analysis ................................................................................... 7
Demographics ................................................................................................. 8
Summary of findings ....................................................................................... 9
Recommendations .......................................................................................... 16
Annex I: Survey tools ................................................................................... 18
**List of Acronyms and Abbreviations**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFP</td>
<td>Acute flaccid paralysis</td>
</tr>
<tr>
<td>BCG</td>
<td>Bacillus Calmette–Guérin vaccine providing protection against tuberculosis</td>
</tr>
<tr>
<td>DCIP</td>
<td>District Center for Immunoprophylaxis</td>
</tr>
<tr>
<td>EPI</td>
<td>Expanded Program on Immunization</td>
</tr>
<tr>
<td>FGD</td>
<td>Focus Group Discussion</td>
</tr>
<tr>
<td>HF</td>
<td>Health Facility</td>
</tr>
<tr>
<td>HW</td>
<td>Health Worker</td>
</tr>
<tr>
<td>IEC</td>
<td>Information, education and communication</td>
</tr>
<tr>
<td>JSI</td>
<td>John Snow Inc.</td>
</tr>
<tr>
<td>MCHIP</td>
<td>Maternal and Child Health Integrated Program</td>
</tr>
<tr>
<td>MNCH</td>
<td>Maternal, newborn, and child health</td>
</tr>
<tr>
<td>MoH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>NTC</td>
<td>National Technical Coordinator</td>
</tr>
<tr>
<td>OPV</td>
<td>Oral polio vaccine</td>
</tr>
<tr>
<td>PENTA</td>
<td>Diphtheria, pertussis, tetanus, hepatitis B, <em>Haemophilus influenza</em> type b</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary Health Care</td>
</tr>
<tr>
<td>RBRCIP</td>
<td>Regional Branch of Republic Center for Immunoprophylaxis</td>
</tr>
<tr>
<td>RCIP</td>
<td>Republic Center for Immunoprophylaxis</td>
</tr>
<tr>
<td>REC</td>
<td>Reaching Every Child</td>
</tr>
<tr>
<td>RED</td>
<td>Reaching Every District</td>
</tr>
<tr>
<td>RI</td>
<td>Routine Immunization</td>
</tr>
<tr>
<td>TB</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>VPD</td>
<td>Vaccine preventable diseases</td>
</tr>
</tbody>
</table>
List of Tables and Figures

Table 1  The total number of survey participants per village
Table 2  Proportion of spouses that migrate to Russia at least once a year among survey respondents

Fig. 1  Map of Khatlon Oblast (region) and location of survey sites (Chugdara and Qizil-Ittifok)
Fig. 2  Proportion of spouses that migrate to Russia at least once a year among survey respondents
Fig. 3  Level of education among respondents by village
Fig. 4  Immunization status of respondents’ children <2yrs of age (based on child immunization card)
Fig. 5  Where respondents reported having their children vaccinated
Fig. 6  Diseases cited by respondents that can be prevented with vaccines
Fig. 7  Proportion of mothers that correctly identified number of visits required for her child to be fully vaccinated
Fig. 8  Sources where respondents reported receiving information about vaccination
Fig. 9  Reasons cited by respondents for why they vaccinate their children
Fig. 10  Known vaccination side effects cited by respondents in each village
Fig. 11  The proportion of respondents who indicated if they knew when to return for their child’s next vaccination visit
Fig. 12  Proportion of respondents’ perceptions about whether they receive enough information from their HW regarding vaccination
I. Background

The Maternal and Child Health Integrated Program (MCHIP) is the United States Agency for International Development (USAID)/Bureau for Global Health's flagship maternal, newborn and child health (MNCH) program. MCHIP is designed to achieve impact at scale by maximizing the contributions of each level of the health service—from the community to the national level. MCHIP works with countries based on their individual needs and circumstances and contributes technical leadership at the global and regional levels. John Snow Incorporated (JSI) leads MCHIP’s work in child health and immunization and brings several decades of experience in health systems strengthening and MNCH to the Program team.

After Tajikistan experienced the largest polio outbreak globally in 2010, despite having consistently reported high immunization coverage, MCHIP was provided funding from the USAID/Almaty regional mission to provide technical assistance to the Ministry of Health (MOH) Republican Center for Immunoprophylaxis (RCIP) for routine immunization (RI) strengthening. MCHIP/Tajikistan aims to ensure the eradication of polio and prevention of future outbreaks of vaccine preventable diseases (VPD) by: (1) improving the MoH capacity for identifying and correcting problems confronting the immunization program across two focus rayons, and (2) promoting a more integrated, public health approach for further improving the immunization program. Specific objectives for the MCHIP/Tajikistan program are:

**Objective 1**: To assist districts with developing and implementing action plans for maintaining optimal immunization coverage, which are based on clearly defined problems and the locally available resources for correcting them.

**Objective 2**: To work together with the RCIP and immunization partners on an integrated public health approach for maintaining optimal immunization coverage at district and community levels.

The baseline survey findings will be used to support program planning, implementation, and monitoring of MCHIP/Tajikistan program objectives. This report summarizes findings and recommendations for next steps, including MCHIP program design and will be shared with rayon (district) and community teams to strengthen their immunization program.

II. Objectives of the baseline survey

**Goal**
The baseline survey was conducted to assess the level of awareness, acceptability, challenges, and use of vaccination services among community decision makers, health workers (HW), mother-in-laws, and mothers with children under the age of two, to establish a basis for the MCHIP/Tajikistan program design for strengthening RI services in two focus rayons, Vahksh and Qabodiyon.

**Objectives**

1. Assess the perception and knowledge around vaccination in two communities across two rayons
2. Identify barriers and challenges to vaccination
3. Identify strengths and opportunities for routine immunization strengthening
III. Survey methodology

Site Selection

The MCHIP/Tajikistan program works across two focus rayons (Vakhsh and Qabodiyon) in the Qurghonteppa zone of Khatlon Oblast (figure 1). This baseline survey was conducted in a single community in each of the rayons, each selected in consultation with the RCIP rayon Expanded Program on Immunization (EPI) managers. Selection was based on immunization coverage and accessibility to services, with a focus on poor performing communities to best understand key barriers and opportunities to vaccination. Communities selected were:

1. Chughdara village of Jamoat Rohi Lenin, Vakhsh rayon from Qurghonteppa zone of Khatlon Oblast. Chughdara village is located 6 km from Vakhsh, with a single health facility (HF) that is in poor condition that is staffed with one doctor who serves four villages that compose the community.

2. Qizil-Ittifok village (or the new name of the village, Vahdat) Jamoat Khudoikuliv of Qabodiyon rayon from Qurghonteppa zone of Khatlon Oblast. Qizil-Ittifok village is located ~45km from Qabodiyon, near the border of Afghanistan. There is a HF that is staffed by one doctor and four nurses.

Figure 1: Map of Khatlon Oblast (region) and location of survey sites (Chughdara and Qizil-Ittifok)

Source: www.nationsonline.org

Data collection methods and tools

The baseline survey used a cross-sectional mixed methods design (i.e., qualitative and quantitative), conducting focus group discussions (FGD) (with caregivers and grandmothers/mother-in-laws) and in-depth interviews with key informants (HWs, village leaders, and Imams). A short quantitative survey was also conducted with caregivers.
Data were collected using five different tools, developed by MCHIP (Section VII, Annex I):

1. Baseline survey questionnaire – caregivers
2. Focus group discussion guide (FGD – caregivers
3. Focus group discussion guide (FGD – grandmothers/mother-in-laws
4. In-depth interview questionnaire – village leaders and Imams
5. In-depth interview questionnaire – HWs/vaccinators

Data were collected over a three week period in May 2013 by the MCHIP/Tajikistan National Technical Coordinator (NTC) and a short-term consultant. MCHIP/HQ staff assisted in data collection in Chughdara village, Vahksh rayon. The NTC and team collaborated with the local HWs to plan for implementation of the survey, which included scheduling interviews with the village leaders and village Imams. Interviews with caregivers were selected at random, starting at a single house (the furthest distance from the HF) and asked if she had a child between the ages of 6 months to two years. If yes, the team asked if she was willing to participate in the survey, and if she needed permission from her husband to participate. If no, the data collection team would proceed to the next house. Caregivers who participated in the survey were also asked to participate in the FGD, and if agreed, were provided with the date, time, and place. Grandmothers/mother-in-laws were recruited through the women’s group leader for the FGD. It is worth noting, the survey team was unable to interview any participants refusing vaccination in Chughdara, but did interview one mother in Qizil-Ittifok, who declined to participate in the FGD. As a result, the summary of participating perspectives is representative primarily among those who vaccinate their children.

Table 1: The total number of survey participants per village

<table>
<thead>
<tr>
<th>Name of community</th>
<th>Number of participating caregivers</th>
<th>Number of participating community leaders</th>
<th>Number of participating Imams</th>
<th>Number of participating health workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qizil-Ittifok village</td>
<td>20</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(Qabodiyon rayon)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chughdara village</td>
<td>15</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>(Vakhsh rayon)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Data entry and analysis

Quantitative data were entered and analyzed in Microsoft Excel® in a data entry template that was developed in advance of entering the data. A cross-checking process was also employed in order to minimize the errors which occurred during data entry. All data was cleaned before the start of analysis. The qualitative data was entered and organized by themes that emerged from a review of the data.
IV. **Demographics**

The participating communities (Chughdara village and Qizil-Ittifok) are located in two focus rayons (Vahksh and Qabodiion, respectively) in the Qurghonteppa zone of Khatlon Oblast (figure 1). Both communities’ primary economic activity is agriculture, most common crops being: cotton, corn, wheat, and vegetables (e.g., potato, onion, carrot, etc.). Agriculture is both for economic purposes and subsistence. Raising of livestock is also an important source of income.

An increase in out migration to Russia (almost one member per household) has resulted in remittances becoming the primary source of income in many households, which has led to a reduction in agriculture activity and raising of livestock. Among the mothers interviewed, 80% in Chugdara had a spouse that migrates to Russia, and 59% in Qizil-Ittifok (figure 2).

Chugdara has a lower level of female education, which respondents attributed to the location of the school, approximately 8km from the village. Additionally, not all fathers allow their daughters to walk alone, without a male companion accompanying her to school. Qizil-Ittifok has a school in the village, lending to a higher level of female education. Figure 3 illustrates the level of education among survey respondents, with a higher proportion of Qizil-Ittifok respondents having completed up to grade 11, compared to those from Chugdara having a wider distribution of education, but higher proportion of lower education.

**Figure 2: Proportion of spouses that migrate to Russia at least once a year among survey respondents**

<table>
<thead>
<tr>
<th></th>
<th>Chugdara</th>
<th>Qizil-Ittifok</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, spouse does not migrate</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>Yes, spouse does migrate</td>
<td>20%</td>
<td>41%</td>
</tr>
</tbody>
</table>

**Figure 3: Level of education among respondents by village**

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Chugdara</th>
<th>Qizil-Ittifok</th>
</tr>
</thead>
<tbody>
<tr>
<td>University degree</td>
<td>0%</td>
<td>7%</td>
</tr>
<tr>
<td>Secondary degree</td>
<td>0%</td>
<td>7%</td>
</tr>
<tr>
<td>Less than secondary (10...)</td>
<td>13%</td>
<td>29%</td>
</tr>
<tr>
<td>Less than secondary (8...)</td>
<td>27%</td>
<td>29%</td>
</tr>
<tr>
<td>Primary education (1 to 4)</td>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td>No education</td>
<td>20%</td>
<td>0%</td>
</tr>
</tbody>
</table>
V. Summary of findings

Vaccination coverage

Chugdara and Qizil-Ittifok HF data from the last 12 months (June 2012 to June 2013) reported high penta3 (third does of diphtheria-tetanus-pertussis [DTP], hepatitis B, Haemophilus influenza type b) coverage between 80 to 92%. HWs interviewed responded that penta3 coverage in their respective community is 100%; however, the research team visited households of community members that do not vaccinate their children. Only one respondent (from Qizil-Ittifok) who does not vaccinate her child participated in the survey, but requested not to participate in the FGD. Figure 4 illustrates immunization status among participating survey respondents, based on the child immunization card. There is a higher proportion of fully immunized children among Qizil-Ittifok respondents compared to Chugdara respondents, despite having fewer immunization days, with monthly vaccination sessions only at the HF (with no outreach or home visits) from the 22nd to the 23rd of each month. Figure 5 reinforces that all respondents from Qizil-Ittifok (94%) reported their children having been immunized at the HF, with the exception of 6% who do not vaccinate their children. Figure 4 shows Chugdara respondents as having a larger proportion of children with incomplete vaccinations, despite the HF conducting vaccination sessions more frequently, almost weekly (days are not fixed), both in the HF (approximately 70% of vaccinations), and also through house-to-house visits for households located at a far distance from the HF (approximately 30% of vaccinations). This was reinforced among respondents when asked where they take their children for vaccination sessions, with 40% responding to have visited the HF, 7% through HW home visit, and 53% reported receiving vaccination services from both visiting the HF and through HW home visit (figure 5).

Neither health facilities in Qizil-Ittifok and Chughdara have cold chain equipment; antigens offered are based on availability at the rayon level. Before vaccination sessions, HWs obtain vaccines and supplies from the rayon level and bring to the HF, keeping vaccines in cold boxes for the vaccination period (up to two days), then discarding any remaining antigen after two days. HWs from both communities explained they inform households of the vaccination session one to two days in advance either by home visit or phone call.

While all vaccination services should be offered free of charge, 56% of respondents interviewed indicated having paid between one and five somoni for the service. HWs interviewed said they charge a small amount to cover the cost of cotton and alcohol, or other supplies, which are not provided by the rayon level and are purchased by the HF. No respondents indicated this as being a barrier to vaccination.
**Migration**

A high level of out migration is experienced in both participating communities, with a large proportion of at least one male family member per household working in Russia at least six months out of the year (table 2).

| Table 2: Proportion of spouses that migrate to Russia at least once a year among survey respondents |
|----------------------------------|----------------------------------|
| Chugdara                         | Migrate: 80%                      | Do not migrate: 20%               |
| Qizil-Ittifok                    | Migrate: 59%                      | Do not migrate: 41%               |

HWs interviewed said that in some cases, when a woman migrates to Russia with her husband and the child is either born in Russia or is under the age of one at the time of migration, the child usually returns fully vaccinated. Internal migration is sometimes a problem resulting in un/under-vaccination. When a husband migrates to Russia and the woman remains in Tajikistan, some will return to their home village with their children. Internal migration is cited by the HWs as a contributing factor to the dropout rate (penta1 to penta3 dropout rate reported at 4% in Chugdara and 10% in Qizil-Ittifok) because women prefer vaccinating their children at their local HF and do not consider vaccinating their child at a different HF. This was reinforced during interviews and FGDs with mothers as her decision to travel is not impacted by the child's vaccination status and she will not seek vaccination at the HF where she is traveling to.

**Vaccination awareness and motivation**

There is a notable acceptance and high level of awareness for vaccination across Chugdara and Qizil-Ittifok. Among all survey participants, 97% indicated vaccinating their child is important to them, taking into account that only one person (from Qizil-Ittifok) who does not vaccinate her child participated in the survey. Based on the interviews and FGDs, it seems the 2010 polio outbreak increased community awareness, and consequently the importance of vaccination, and also suggests increased motivation to vaccinate children against other VPDs, especially in Qizil-Ittifok where a higher number of confirmed polio cases were reported and many children were left with permanent disabilities. Additionally, Chugdara experienced a typhoid outbreak in 2012, which resulted in vaccination campaigns, that was also noted as having increased community awareness and acceptance around vaccination in that community.

Most respondents were able to name at least one disease that vaccines prevent against, most commonly polio, among other VPDs. The perception, as illustrated in figure 6, is that vaccines are protective against more diseases than is actually the case.

![Figure 6: Diseases cited by respondents that can be prevented with vaccines](image-url)
Based on interviews with mothers, knowledge of a VPD did not appear to be an indicator for a mother’s motivation whether or not to vaccinate her child. Additionally, the majority of mothers correctly identified the number of vaccination visits required for her child to be fully vaccinated (figure 7).

Mothers reported they do not receive any negative information from outside sources concerning vaccination. The primary sources of information about vaccination cited by respondents are from their HW and television (figure 8). Other sources of information included their social circle and relatives.

The primary motivation cited by mothers to vaccinate their child was to prevent disease and keep their child healthy (35% in Qizil-Ittifok and 93% in Chugdara), and 41% in both villages said because the HW advised them to and that it is good for the health of the child. Others cited prevention and vaccination being cheaper than treatment of disease (figure 9). Mother-in-laws, as important household decision makers, reinforced this, citing the value and importance of vaccination to prevent serious diseases (citing polio, measles, diphtheria, and pertussis) as being more cost effective than treatment, in addition to being an important preventive measure for the community.
While mothers acknowledge clear motivation to vaccinate their child, they depend on the HW to inform them when it is time to vaccinate their child. They said it is the responsibility of the HW to inform them when it is time to vaccinate their child; therefore, they do not make an effort to remember when to return for vaccination. As a result, the mothers will wait for the HW to inform them when the next vaccination session will be held. Mothers will not bring their child for vaccination without the invitation from the HW, which was discussed in the FGD’s. This has no indication on their value of the service, but appears to be a delineation of responsibility between the mother and the HW. Most mothers did report knowing how many visits are required for their child to be fully vaccinated (figure 7).

Mothers in both communities described their full confidence and trust in their HW, and 100% of participants indicated having a positive experience with their HWs. Wait time does not appear to be a deterrent as 81% of mothers considered the wait time for vaccination to be short (approximately 5 to 10 minutes).

**Perceived risks and barriers to vaccination**

Mothers said they do not hear any negative information concerning vaccination, except on expected side effects the child might experience following vaccination. Mother-in-law’s and mothers confirm that HWs explain that the child might experience malaise, fever, and other side effects after vaccination, and provide guidance on management and treatment. Some families discourage follow-up vaccination after the child experiences side effects, which sometimes leads to drop out and incomplete vaccination. This was reinforced through in-depth interviews with the HWs. Among the mothers interviewed, they reported seeking advice from their mother-in-law on immunization and how to manage side effects following immunization, including fever and swelling. However, some mothers indicated that vaccination side effects sometimes have a negative impact on a mother-in-laws’ support for the decision to receive the next vaccination in its series. A mother in Chugdara, whose child had incomplete vaccinations, did not take her child for follow-up vaccination because her mother-in-law (who was also interviewed) would not allow her to go after the child experienced high fever following the first vaccination. Mothers in Chugdara mentioned that if a child gets too sick after vaccination, this may influence whether the mother-in-law will give permission for the next vaccination. These examples illustrate the influence and role the mother-in-law can play in household decision making. Among mothers interviewed, 63% citing fever and 31% citing swelling as common side effects their child has experienced, and 25% citing no side effects at all (figure 10).
Another challenge cited by respondents is the cultural norms between men and women. Some husbands do not approve of their wives speaking with men without a male family member present, and with HWs being predominantly male, this creates challenges on whether a woman can go to the HF, or if a male HW can be allowed into the home. In Chugdara, women mentioned it is not acceptable for them to have an extended conversation with a male HW in the absence of a male household member, which can also cause problems with her husband. Some mother-in-laws indicated that they do not always allow HWs into their home for vaccination visits. Community leaders and members also suggested the need for a female HW who can communicate to women, which could help increase acceptability of husbands to encourage women to go to the HF for vaccination. A female HW could also assist with providing home-based vaccination services.

**Household decision making structure**

A high proportion of households participating in the survey (69%) had a spouse that migrated to Russia at least six months out of the year. Mothers explained that their mother-in-laws, play a significant role in making decisions that concern the health of the child. Among the households visited, in the absence of the husband that migrates to Russia, the decision making is then delegated to the mother-in-law. Most mothers indicated that they should inform their mother-in-laws of the vaccination session and request permission to take the child for vaccination. Not all fathers interfere with the decision to vaccinate the child, but they trust their mother to make this decision. If the father is present, he will sometimes seek the guidance of his mother for making some decisions, including whether to vaccinate the child. Most spouses of respondents were reported to not object to vaccinations.

**Health worker communication**

The participating communities seem to have a significant amount of trust for the HWs. Mothers and mother-in-laws said they tend to listen to the advice of the HW for childhood vaccination and that the community HWs are the primary source of information on informing communities about vaccination. The research team observed the close relationship the HW has with his respective community; he was very familiar with each household,
how many children they had, and their vaccination status.

As discussed above, mothers in both villages said they wait for the HW to inform them when their child is due for vaccination, whether they know the date to return themselves, or not. Mother-in-laws and HW’s reinforced this point saying the HW knows when a mother needs to bring her child for the next vaccination and that the mother will not remember the return date without the support of the HW, despite the return date being marked on the child immunization card. In Chugdara, 87% of respondents said the HW tells them when to return for vaccination, and 80% said they know the date when their child is next due for vaccination. However, in Qizil-Ittifok, 88% of respondents said their HW tells them when to return, but 47% actually know their return date, with 35% citing they should return either the 22nd or 23rd of the month, while others said their HW will inform them when the date approaches (figure 11). In Qizil-Ittifok, HWs inform mothers to return the 22nd or 23rd of the corresponding month for the next vaccination, as those are the standard vaccination days at the HF. In both villages, notification is most commonly done through home visits or phone calls one to two days before a vaccination session, reminding the mother of the vaccination session and if it will be held at the HF, outreach visit, or upcoming campaign. The HW also provides his phone number to households for any needed consultation.

During the interviews, HWs in both communities did not acknowledge their communication to caregivers or the community about what diseases vaccines protect against, how many vaccinations a child needs to be fully vaccinated (outside of reminding caregivers of their next visit), nor the common side effects to be expected following vaccination as a part of their responsibilities. However, 94% of mothers in both villages said HWs are their primary source of information for immunization (figure 8), and 91% said the HW explains common side effects and how to manage them. In Qizil-Ittifok, 24% said the HW does not tell them which vaccination her child is receiving and what disease it protects against, compared to 0% in Chugdara. Additionally, 71% of respondents from Qizil-Ittifok feel that they do not receive enough information from their HW about immunization nor the diseases vaccines protect against, compared to 7% in Chugdara (Figure 12).

Community engagement and mobilization
In both communities, HWs are highly valued and morally supported by village leaders, Imams, and its members. It was noted that HWs are poorly paid, but despite minimal compensation, HWs in these communities are still impactful in their work. It is perceived that payment of services, or any monetary support for the HF, is the responsibility of the government, and not that of the community. While the community recognizes the need to increase HW salary, improve the HF, and increase access to commodities, there was noted resistance that the community should contribute given the perception this is the responsibility of the government.

In-depth interviews with village leaders and Imams described their primary roles in mobilizing communities for vaccination campaigns and assisting to raise community awareness. Imams also play an active role, specifically for discussing immunization, in addition to raising awareness and information dissemination regarding campaigns at Friday mosque. For example, during the 2010 polio outbreak, village leaders and Imams supported HWs to raise awareness among the population, which included recommending members of the community to immunize their children. In Chugdara,
during a 2012 typhoid outbreak, community leaders worked together with HWs to detect any typhoid cases within the community, in addition to participating in the organization of the typhoid vaccination campaign. Neither village leaders nor Imams play an active role in RI outside of this role. However, the Imam did report providing advice to families for improving hygiene. Imams also play an advisory role, in addition to acting as a mediator for challenging situations. An Imam in Chugdara acknowledged that if a family refuses to vaccinate their child, he will mediate this situation and work with the family to increase their awareness and encourage them to vaccinate their child. From the HW perspective, he believes that engagement from community leaders, Imams, and teachers for raising community awareness and mobilization for campaigns and beyond is an essential element to vaccine acceptance and community motivation to vaccinate children. Overall, both the village leaders and Imams indicated that it is up to the community HW to educate the community on the benefits of immunization and the disease it protects against. Community leaders do not believe it is their role to influence household decision making regarding vaccination. They will support the HW to disseminate information, but will not interfere in household decision making, citing that as the role of the HW. The religious leaders encourage communities to vaccinate their children, but do not enforce decision making within the household. The Imam cited that disease prevention measures are explained in the Koran, which is what he uses to reinforce the message to vaccinate children.

Men play the prominent role in community mobilization and decision making, including dissemination of information. Mother-in-laws reinforce this, indicating that it is the responsibility of men in the community to inform the population and to mobilize community members; this is not a role for women in the community. Within the mosque, Chugdara has four Imams, and one who was interviewed said he has a female assistant that helps to work and communicate with women.
VI. Recommendations

There is wide acceptance of immunization, as reflected in the high coverage and respondents' replies, and mothers care about vaccination as a contribution to the good health of their child.

Based on the findings, the data suggest that fixed dates for vaccination lead to more complete and timely vaccination. Dates for vaccination services should be fixed so mothers know which days to return to the HF. While Chugdara has a higher frequency of services offered at the HF, through outreach, and campaigns, they also have a large proportion of under-vaccinated children. Qizil-Ittifok only offers fixed services at the HF, but had a higher proportion of completed vaccination, and most mothers knew when to return to the HF. However, the Qizil-Ittifok HF is located in a central location and the village is much less spread out compared to Chugdara. Consistency of services on fixed days would be recommended to help mothers to depend on services, and better remember when to visit the HF; however, outreach services should continue to complement fixed services in Chugdara, given the geographic distance of the HF for some inhabitants.

HWs in both communities are highly regarded and trusted in their respective communities, and they play a central role in the community. Mothers depend on the HW as their primary source of information regarding vaccination and to remind them when their child is due for vaccination. The data indicate that communities do not receive enough information regarding VPDs nor side effects of vaccinations. It was clear through respondents' replies and interviews with the HWs that side effects contribute to drop out from the vaccination series. HWs should be better prepared to effectively communicate to mothers expected side effects, the reasons for them, and how best to manage. It would also be recommended to engage mother-in-laws in such discussions given their significant decision making power within the household. Strategies for improved interpersonal communication between HWs and communities should be considered through training, or providing information, education and communication (IEC) materials to complement communication. Both communities also suggested recruiting a female HW, or assistant, to accommodate for cultural sensitivities and the discomfort of some husbands allowing their wife to have a conversation with a man outside the family, or mother-in-laws that do not allow men into the house compound if the head-of-household is away.

Based on interviews and FGDs, most mothers do not take the initiative to bring their child for vaccination, whether they are aware of the date or not, until an invitation or reminder is provided. There appears to be the belief that the HW is the one who knows when the mother should return, and should therefore remind her through an invitation to the next vaccination session. While mothers in Tajikistan retain child immunization cards indicating the date to return, it does not empower them to bring their child for their next vaccination without a reminder of the HW. Opportunities should be explored to better understand this dynamic and how to better empower mothers to be responsible for their child’s vaccination with less dependence on the HW. It is unclear whether this relationship dynamic contributes to untimeliness (or timeliness) of vaccination.

Decision making structures within both communities play a powerful role when deciding to vaccinate a child. Mother-in-laws and fathers should be engaged by HWs to increase awareness and acceptance for vaccination, especially when home visits are conducted by HWs. While community leaders and Imams play an important role in mobilizing the community for campaigns, they should be empowered to continue encouraging their communities to vaccinate their children. Imams use the Friday mosque as an opportunity for information dissemination, utilizing text from the Koran to reinforce messaging for
childhood vaccination. This relationship should be reinforced and to encourage working with families that are refusing vaccination for religious reasons.

Migration (internal and external) appears to be a contributing factor for incomplete or untimely vaccination. Strategies need to be considered when the period for migration of household members begins.
VII. Annex: Survey tools

Baseline Survey questionnaire – caregivers

Date: ________________ Name of Interviewer: _________________________
Village: ____________ Jamoat: ______________ Rayon: ___________________
Relationship of interviewee with the child: ________________________________

My name is …………………………. I am from the MCHIP project, working with the Ministry of Health’s immunization program.

1. How old is the youngest child in the house (your child or grandchild)? _______ months

   If the respondent is not sure, ask if s/he can find the child’s health passport or some other document that may have the birth date.

2. When was the child born? Date: __________/________/________ (dd/mm/yr)

   If the exact birth date cannot be ascertained, what is the best estimate of the child’s age in months?

   Decision: Is the child’s age between 6 and 24 months? Yes □ No □

   If there is no child in the age range you are looking for, thank the person and move on.

Part 2:

1. Ask to see the child’s health passport. If the person cannot produce a health passport, ask questions to categorize the child’s immunization status. (How many times has the child been brought for vaccinations? To what place or places? About how old was the child each time? How many vaccinations did the child receive each time? Did the child receive injections or drops? Where on the child’s body were the injections given?)

   1. No immunizations
   2. Incomplete
   3. Fully immunized

   Remember: incomplete means that the child has at least one vaccination but is currently eligible for one or more additional vaccinations; fully immunized means that the child has all the immunization for which s/he is currently eligible. It does not necessarily mean that the child is completely immunized.
1. Demographic information of respondent:
   a. Sex:
      i. ___ male
      ii. ___ female
   b. Relationship to child:
      i. ___ mother
      ii. ___ other:_______
   c. Age:
      i. ___ 18-24
      ii. ___ 25-35
      iii. ___ 36-45
      iv. ___ >46
   d. Level of education:
      i. ___ no education
      ii. ___ primary education
      iii. ___ less than secondary (8 to 9 class)
      iv. ___ less than secondary (10 to 11 class)
      v. ___ completed secondary
      vi. ___ higher than secondary
   e. How many children do you have?
      i. ___ 1-2
      ii. ___ 3-4
      iii. ___ 5-6
      iv. ___ >6

2. Does your spouse migrate?
   a. ___ yes
   b. ___ no
   c. If yes,
      i. Where?_________
      ii. For how long?_________

3. Do you take your child to get vaccinated?
   a. Yes____ (move on to question 4)
   b. No_____ (go to question 1a-3a)

   If a mother has a child with incomplete vaccination, or has refused all together:
   1a. Why have you decided not to vaccinate your child?

      2a. How has the decision to not vaccinate/not complete vaccination been influenced? (media, relative, HH decision maker, etc.)
      a. ___ TV
      b. ___ radio
      c. ___ internet
      d. ___ relative
      e. ___ friend/neighbor
      f. ___ HH decision maker
g. ___ other
3a. What has made you decide not to complete your child’s vaccination series?

4. Why do you take your child to get vaccinated (what is your motivation to vaccinate your child)?

5. Is vaccinating your child important to you?
   a. Yes____
   b. No____
   c. Why or why not?

6. Can you tell me what diseases vaccination protects against? (check all that are cited)
   a. ___diphtheria
   b. ___tetanus
   c. ___pertussis
   d. ___Hep B
   e. ___polio
   f. ___measles
   g. ___tuberculosis
   h. ___rubella
   i. ___hemophilia, type B
   j. ___other (please indicate ________________)

7. How many vaccinations or visits does a child need to be fully vaccinated (add up number based on age visits are recommended to determine number of visits)?
   a. _______

8. Where do you take your child for vaccination?
   a. ___HW home visit
   b. ___Health facility
   c. ___Other (please indicate)

9. Do you pay for vaccination?
   a. ___Yes
   b. ___No

10. Do you think you get enough information from your HW on immunization?
    a. Yes____
    b. No____

11. What sources do you receive information from about vaccination?
    a. ___TV
    b. ___radio
    c. ___media
    d. ___health professional
    e. ___booklet
    f. ___banner
    g. ___poster
    h. ___leaflet
    i. ___social circle (friends/neighbors)
    j. ___relatives
    k. ___other: ________________

12. Does the HW explain to you common side effects of the vaccine?
    a. Yes____
    b. No____
13. What are common side effects of vaccination?
   a. __fever
   b. __abscess
   c. __redness
   d. __swelling
   e. __other: __________________

When you take your child for vaccination services, can you tell me more about your experience:

1. Waiting experience:
   a. Long____
   b. Short____
   c. About right____

2. Interaction with HW:
   a. Positive____
   b. Negative____

3. Does the HW tell you which vaccination your child receives and what disease it protects against?
   a. Yes____
   b. No____

4. Does the HW tell you when you should return for the next vaccination?
   a. Yes____
   b. No____
   c. Do you know when to return?
      i. Yes___
      ii. No____

Would you be willing to participate in an hour and a half to two-hour discussion with other mothers (grandmothers) from your neighborhood?

Yes (will participate) □     No □

Tell them when and where their session will be. Explain that their names will not be used in any written or oral report and the discussion will be tape recorded. The reports will talk only about the opinions and experiences of certain types of people. And the discussion will be tape recorded. If yes, thank the person and ask if they will walk or would like to be picked up. Agree on a pick-up time and give them a slip of paper with the time and date for pickup as a reminder. Ask if they will need someone to watch other young children during the discussion. Yes ___ No ___ Mention that tea and coffee will be served at the discussion.

If they don’t want to participate, ask them to please explain why but do not pressure the person to change his/her mind.

Reason for not wanting to participate:
Thank them for their time now and/or willingness to cooperate.
FGD discussion guide – caregivers

The facilitator will need to modify the questions slightly for the different groups.

<table>
<thead>
<tr>
<th>Main Topics</th>
<th>Key Questions</th>
<th>Possible Probing Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>►Reason for discussion (purpose of the study)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>►How it will work: ground rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>►Appreciation for participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>►Repeat that participation is voluntary and that participants’ names and individual opinions will not be shared with anyone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>►Request consent for recording the discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Prepare and hand out name tags with first names only]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concept of immunization</th>
<th>►What is the purpose of immunization?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>►How does it work?</td>
</tr>
<tr>
<td></td>
<td>►How important is it for children to get all of their immunizations?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experiences with immunization services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next we’d like to discuss your experiences in getting your children immunized:</td>
</tr>
<tr>
<td>►Can each of you please tell us where you have gone to have your child immunized (for the no immunization group, ask where they have gone for health care)? Be sure to mention if your child received any immunizations outside of Your community.</td>
</tr>
<tr>
<td>►Can you please tell us about your experiences when you brought your children for immunization?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reasons for current immunization status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose the appropriate one: All of you have young children who have (1) no immunizations, (2) one or more immunizations but not all of the ones the child could have received, (3) all of their recommended immunizations. Can you please explain the reasons why your child has:</td>
</tr>
<tr>
<td>* no immunizations</td>
</tr>
<tr>
<td>* only some of the immunizations he is eligible to receive</td>
</tr>
<tr>
<td>* all of his/her immunizations?</td>
</tr>
<tr>
<td>For the discussions of caregivers of children with mixed vaccination status, ask the participants to explain which group they belong to. Then go group by group to ask them to explain the reasons why their children are in that group.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>►What diseases does immunization protect against?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>►Does getting vaccinated guarantee that the person can never get the disease?</td>
</tr>
<tr>
<td></td>
<td>►How many vaccinations or visits does a child need?</td>
</tr>
<tr>
<td></td>
<td>►By what age should a baby receive all of the basic vaccinations?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>►What have you liked about your experiences?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>►What aspects of getting your children immunized have been difficult or unpleasant? (Please be frank because we are asking this so we can learn how to improve the services.)</td>
</tr>
<tr>
<td></td>
<td>►What does the vaccinator normally tell you when s/he vaccinates your child? Does the vaccinator talk about:</td>
</tr>
<tr>
<td></td>
<td>* what vaccines or diseases the shots are for?</td>
</tr>
<tr>
<td></td>
<td>* side effects?</td>
</tr>
<tr>
<td></td>
<td>* when to bring the child back for more immunizations?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>►Who in the family encourages or discourages immunization?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>►What community members or leaders have influenced your decision to have or not have your child immunized? Please tell us a little about what they said.</td>
</tr>
<tr>
<td></td>
<td>►[for the no immunization group] Where do you bring your children for care when they are sick? Have you brought your youngest child for treatment? If so, how was that experience?</td>
</tr>
<tr>
<td></td>
<td>►How convenient for you are the days and hours when immunizations are offered?</td>
</tr>
<tr>
<td></td>
<td>►What, if any, problems do you have in getting off from work to bring your children for vaccination?</td>
</tr>
<tr>
<td></td>
<td>►Does it cost you any money to get your child vaccinated?</td>
</tr>
<tr>
<td></td>
<td>►Are you concerned about bad things that people say about immunization?</td>
</tr>
<tr>
<td></td>
<td>►Do you and your family spend the entire year in your community? Does your travel affect your ability to bring your child for immunizations?</td>
</tr>
<tr>
<td></td>
<td>►Have you ever brought your child for immunizations?</td>
</tr>
</tbody>
</table>
vaccination but not been able to receive it? [If so] why?  
► Are you concerned about side effects from immunization? Have any of you not brought your child because of this concern?

<table>
<thead>
<tr>
<th>Suggestions</th>
<th>What can the Ministry of Health do to better inform people?</th>
</tr>
</thead>
</table>
| ► Please let us know your ideas for how immunization services could be improved?  
► How can people become better informed about the importance of immunization and about immunization services? | What can others do to better inform people? |

Note: A form for note-taking at the FGDs is to be prepared.
FGD discussion guide – grandmother/mother-in-laws

The facilitator will need to modify the questions slightly for the different groups.

<table>
<thead>
<tr>
<th>Main Topics</th>
<th>Key Questions</th>
<th>Possible Probing Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for discussion</td>
<td>► What is the purpose of immunization?</td>
<td>► What diseases does immunization protect against?</td>
</tr>
<tr>
<td>(purpose of the study)</td>
<td>► How does it work?</td>
<td>► Does getting vaccinated guarantee that the person can never get the disease?</td>
</tr>
<tr>
<td></td>
<td>► How important is it for children to get all of their immunizations?</td>
<td>► How many vaccinations or visits does a child need?</td>
</tr>
<tr>
<td>How it will work:</td>
<td></td>
<td>► By what age should a baby receive all of the basic vaccinations?</td>
</tr>
<tr>
<td>ground rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appreciation for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeat that participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>is voluntary and that</td>
<td></td>
<td></td>
</tr>
<tr>
<td>participants’ names and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>individual opinions will</td>
<td></td>
<td></td>
</tr>
<tr>
<td>not be shared with anyone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Request consent for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>recording the discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Prepare and hand out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>name tags with first names</td>
<td></td>
<td></td>
</tr>
<tr>
<td>only]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Concept of immunization    | Next we’d like to discuss your opinion of children immunized:                |                                                                                             |
|                            | ► Can you please tell us about your opinion of childhood vaccination?        |                                                                                             |
|                            | ► What is your role in household decision making for the health of the child?|                                                                                             |
|                            | ► How does your role differ from that of your son when deciding whether to vaccinate the child? |                                                                                             |
| Perception of              | ► Who in the family encourages or discourages immunization?                  |                                                                                             |
| immunization services      | ► What are barriers or challenges to having the child in your household immunized? |                                                                                             |
|                            | ► Why do you tell your daughter-in-law to vaccinate her child? -OR-           |                                                                                             |
|                            | ► Why do you discourage her from vaccinating her child?                      |                                                                                             |
|                            | ► What community members or decision makers influence your decision to encourage or discourage vaccination? |                                                                                             |
|                            | ► Does your son’s migration to Russia (or elsewhere) impact the decision to vaccinate the child? |                                                                                             |
|                            | ► Are you concerned about the side effects from vaccination (e.g., fever)?   |                                                                                             |

| Suggestions                | ► Please let us know your ideas for how immunization services could be improved? | What can the Ministry of Health do to better inform people?                                   |
|                            | ► How can people become better informed about the importance of immunization and about immunization services? | What can others do to better inform people?                                                  |
In-depth interview guide – community leaders

Name of the interviewer:
Position:
Village: ____________________ Rayon: ____________________

Date:……/……./………

Background on the Village

1. Can you please tell me about the people who live in your village? (Probe: socio-economic status (rich/poor), migration, economic activity)
2. What are the main challenges that families in your community face?

Roles/Roles in Health

3. Can you please explain your main responsibilities as a community leader?
4. What are your responsibilities in the area of health?
5. Can you please describe to me your interactions with health services?

Role in Immunization

6. How do you, or other community leaders, support childhood immunizations in your community? (Probe: on outreach days? Supplementary immunization days? Campaigns?)
7. Has immunization been discussed in any recent community meetings? Yes ___ No ___ [If yes] what was discussed?

Opinions on Immunization

8. In your opinion, how good a job is the government doing to protect children in your community against vaccine-preventable diseases?
9. How well informed about immunization do you think families are in your community?
10. In your opinion, how motivated are families in your community to get their children immunized?
11. Please tell me your suggestions for how immunization services might be improved for people in your community?
12. What are your suggestions for how the health facility or others can better inform and motivate families to bring their children for all of their vaccinations before their first birthday?

Conclusion:
I have finished with my questions. Is there anything else we have not discussed that you would like to talk about?
Thank you very much for your time.
In-depth interview guide – health workers (vaccinators)

Names of the interviewer and notetaker:
Position of person interviewed (check one): Vaccinator ___ Facility Director ___
Other: ________________________
Village: ______________________________

Introduction

1. What are your main responsibilities?
2. What are your main responsibilities regarding immunization?

Knowledge of Immunization

3. Who are your target groups for immunization?
4. How large is your population of children to 1 year?
5. What was your immunization coverage last year?
6. The last quarter?
7. What % of your vaccinations are given in the facility and what % during home visits? You can estimate if you don’t know exactly.
8. Don’t know ___ In facility _____ During home visit _____
9. What is your dropout rate (penta/DTP1 to penta/DTP3)?
10. Don’t know ___ Dropout rate ___

Immunization Program

11. What antigens are available when in this health facility?
12. How is this schedule maintained with home visits?
13. Do you have sufficient staff for immunization? Yes ___ No ___
14. [If not] please explain.
15. Do you have sufficient vaccine and other resources for immunization? Yes ___ No ___ [If not] please explain.
16. How do you think parents in your area feel about immunization?
17. What is the basis of your opinion?
18. How does your facility inform and educate the public about immunization and immunization services?
19. Does your facility involve community leaders and groups in promoting immunization? Yes ___ No ___
20. [If yes] how? [If no] why not?
21. Does your facility do anything to identify newborns in your service area?
22. Yes ___ No ___
23. [If yes] what do you do and what are the results?
24. Does your facility do any tracking and follow-up of newborns &/or of dropouts?
25. Yes ___ No ___
26. [If yes] what do you do and what are the results?

Opinions on the Immunization Program

27. In your opinion, what are the main reasons why some children in your area have no or incomplete immunizations?
28. What kind of migration exists in this community (e.g., internal/external)?
29. Do you feel that the migration of families into and out of this community affects your immunization coverage? Yes ___ No ___ Don’t know ___
30. If so, please explain how?
31. Do you have any suggestions for addressing this?
32. What would make it easier for your facility to deliver better immunization services…what could your facility, the rayon-leve, or the Ministry of Health do better?
33. What would you like to see done to improve the way that families utilize the immunization services?

Conclusion:
This concludes our discussion. Is there anything we have not discussed that you would like to discuss? Thank you for your time.