Health Extension Workers’ Contributions to Strengthening Routine Immunization in One Woreda

Case Study

Hintalo Wajerate Woreda
Tigray, Ethiopia
Acknowledgements

AUTHOR:

Shamara Wheldon

With the assistance of Tsehaye Kiros, translator, without whom this case study would not have been possible

EDITED BY:

Lisa Oot
Marieme Dia
Zenaw Adam
Jenny Sequeira
Salem Melaku Hailu

IN COLLABORATION WITH:

Universal Immunization through Improving Family Health Services Project (UI-FHS)/JSI Research & Training Institute, Inc. , led by Haileslassie Tsigabu

Hintalo Wajerate Woreda Health Office Staff

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Cover Photo: Hintalo Wajerate
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## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>Bacille Calmette-Guerin vaccine</td>
</tr>
<tr>
<td>FIM</td>
<td>Field Immunization Manager</td>
</tr>
<tr>
<td>FMOH</td>
<td>Federal Ministry of Health</td>
</tr>
<tr>
<td>HC</td>
<td>Health Center</td>
</tr>
<tr>
<td>HEP</td>
<td>Health Extension Program</td>
</tr>
<tr>
<td>HEWs</td>
<td>Health Extension Workers</td>
</tr>
<tr>
<td>HF</td>
<td>Health Facility</td>
</tr>
<tr>
<td>HP</td>
<td>Health Post</td>
</tr>
<tr>
<td>HSDP</td>
<td>Health Sector Development Program</td>
</tr>
<tr>
<td>IDI</td>
<td>In-depth Interviews</td>
</tr>
<tr>
<td>JSI</td>
<td>John Snow Inc.</td>
</tr>
<tr>
<td>JSI R&amp;T</td>
<td>JSI Research &amp; Training Institute, Inc.</td>
</tr>
<tr>
<td>MGDs</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organizations</td>
</tr>
<tr>
<td>OPV</td>
<td>Oral Polio Vaccine</td>
</tr>
<tr>
<td>PCV</td>
<td>Pneumococcal Conjugate vaccine</td>
</tr>
<tr>
<td>Penta</td>
<td>Pentavalent Vaccine</td>
</tr>
<tr>
<td>PHCU</td>
<td>Primary Health Care Unit</td>
</tr>
<tr>
<td>RHB</td>
<td>Regional Health Bureau</td>
</tr>
<tr>
<td>RI</td>
<td>Routine Immunization</td>
</tr>
<tr>
<td>Rota</td>
<td>Rotavirus vaccine</td>
</tr>
<tr>
<td>UI-FHS</td>
<td>Universal Immunization through Improving Family Health Services</td>
</tr>
<tr>
<td>WHDAs</td>
<td>Women Health Development Armies</td>
</tr>
<tr>
<td>WoHO</td>
<td>Woreda Health Office</td>
</tr>
</tbody>
</table>
Executive Summary

Universal Immunization through Improving Family Health Services (UI-FHS) is a three and a half year learning project implemented by JSI Research & Training Institute, Inc. in collaboration with the Federal Ministry of Health (FMOH) of Ethiopia. This project aims to learn, document, and share evidence with the FMOH and other stakeholders on how universal immunization could be achieved through affordable, practical, and sustainable approaches to continuously reach all women and children with life-saving potent vaccines. UI-FHS is active in three woredas¹, Arbegona, Assaieta, and Hintalo Wajerate located in SNNPR, Afar, and Tigray respectively.

This case study is a collaborative work between the Hintalo Wajerate woreda health office (WoHO) in Tigray and the UI-FHS project to support the “best practices” initiative implemented by the Federal Ministry of Health (FMOH). This case study is designed to better understand what contributions health extension workers (HEWs) make to routine immunization (RI) services in Hintalo Wajerate woreda. To fully understand HEW contributions, two qualitative data collection methods were used: in-depth interviews (IDIs) and observations (to assist with reliability). The data was then analyzed using Weft Qualitative Data Analysis software and Microsoft Excel for both data analysis and graph generation.

In Ethiopia, HEWs administer life-saving immunizations as a proactive measure to fight against deadly, vaccine-preventable diseases. The HEWs of Hintalo Wajerate in the Tigray region provide a foundational link between the government health service system and rural communities. They are working collaboratively with their community leaders, religious leaders, and women’s health development armies (WHDAs) to provide preventative immunization services to all kebeles² in the woreda.

Findings from this case study show that HEWs in Hintalo Wajerate are generally performing at high levels considering to their education level, years of experience on the job, and the resources available. They are adapting, establishing, and implementing various defaulter tracing strategies, educating women about the benefits of RI services, and finding creative ways to work within Hintalo Wajerate’s WoHO open vial policy³. HEWs are providing regular outreach sessions every month while delicately balancing other health extension program (HEP) responsibilities. A 2011 rapid assessment conducted by UI-FHS in Hintalo Wajerate found HEWs providing outreach sessions on schedule with minimal interruption—one of the contributing factors of the woreda’s relatively high immunization coverage.

¹ A woreda is similar to a district or county in Ethiopia.
² A kebele is a sub-unit of a woreda.
³ Ethiopia’s multi-dose open vial policy at national level does not provide specific guidance on how many children must be present to open a multi-dose vial, but in Hintalo Wajerate, the woreda health office guidance is that the Bacille Calmette-Guerin (BCG) vial should only be opened if there are seven or more children eligible, while a measles vial should be opened for even one eligible child.
I. Background Information

A. Ethiopian Government Health Structure

The Federal Ministry of Health (FMOH) develops program concepts, standards, and implementation guides for all health services in Ethiopia. The FMOH divides Ethiopia into nine regions, each region having its own regional health office that provides technical and administrative support to the woreda health offices, adapts new implementation guidelines, and compiles all data collected at the woreda level for the FMOH. Each region is separated into zones and then subdivided into woredas. Woreda health offices (WoHOs) provide supportive supervision and technical support to all health centers (HCs) and health posts (HPs), compiles data from the HCs, and adapts all materials provided by the regional health bureaus (RHBs).

Figure 1: Ethiopian Government Health Structure

B. Health system overview in relation to primary health care

The health extension program is set up as the first line of preventive care and basic curative care in the country’s health system, and functions as a key referral system for more complicated curative cases. The HP represents this first level of care. The health delivery system in Ethiopia centers around the primary health care unit (PHCU), with referral levels above it as follows:

1. **Primary Health Care Unit** includes one health center and a sub-set of health posts—usually five HPs.
   - **Health Post** promotes healthy behaviors, provides preventative health care, and is the first line of care for basic curative services for maternal/childhood illnesses to rural communities. Most HPs consist of two health extension workers (HEWs) with one year of basic health training (serves approximately 5,000 people)
- **Health Center** provides the first referral system from HPs and offers a more complete package of curative care, with a team of higher qualified health staff such as midwives, nurses, etc. (serves approximately 25,000 people)

2. **Woreda Hospital** provides referral care from a PHCU facility and provides surgery and specialist care services (serves approximately 250,000 people)

3. **Zonal Hospital** provides an additional form of referral care (serves approximately one million people)

4. **Specialized Hospital** trains medical students and other health professionals and are usually located at the regional level or above.

**C. Health extension program background information**

The Health Extension Program (HEP) was launched in 2003 as part of the health sector development program (HSDP), which responded to the Millennium Development Goals (MDGs) of improving preventative health services in Ethiopia. The HEP is a platform of basic preventive health services targeting households in rural communities. HEP consists of four components; hygiene and environmental sanitation, family health services, disease prevention and control, and health education and communication. The HEP components are:

<table>
<thead>
<tr>
<th>Table 1: Health Extension Program Components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hygiene and Environmental Sanitation</strong></td>
</tr>
<tr>
<td>1. Building and maintaining healthful housing</td>
</tr>
<tr>
<td>2. Construction, usage, and maintenance of sanitary latrines</td>
</tr>
<tr>
<td>3. Control of insects, rodents, and other biting species</td>
</tr>
<tr>
<td>4. Food hygiene and safety measures</td>
</tr>
<tr>
<td>5. Personal hygiene</td>
</tr>
<tr>
<td>6. Solid liquid waste management</td>
</tr>
<tr>
<td>7. Water supply safety measures</td>
</tr>
<tr>
<td><strong>Family Health Service</strong></td>
</tr>
<tr>
<td>8. Maternal and child health</td>
</tr>
<tr>
<td>9. Adolescent and reproductive health</td>
</tr>
<tr>
<td>10. Family planning</td>
</tr>
<tr>
<td>11. <strong>Vaccine Services</strong></td>
</tr>
<tr>
<td>12. Nutrition</td>
</tr>
<tr>
<td><strong>Disease Prevention and Control</strong></td>
</tr>
<tr>
<td>13. HIV/AIDS and tuberculosis prevention and control</td>
</tr>
<tr>
<td>14. Malaria prevention and control</td>
</tr>
<tr>
<td>15. First aid</td>
</tr>
<tr>
<td><strong>Health Education and Communication</strong></td>
</tr>
<tr>
<td>16. Health education and communication methods</td>
</tr>
</tbody>
</table>
**The Health Post (HP)**

The center of operation for the HEP is the health post, which functions under the supervision of the PHCU. The health post also receives technical support from the supervising PHCU and the WoHO. HPs are located at the kebele level (the lowest functional government body). If possible, the HP is positioned near other kebele administrative offices to foster mutual cooperation among other government sectors.

**The Health Extension Worker (HEW)**

Health extension workers are typically young women, with at least a tenth grade education, who are chosen from their communities to spend one year studying at a technical and vocational college to receive a HEW certificate of education. The HEWs are then assigned to a health post where they will cooperatively work with one other HEW in their respective kebeles. The HEWs will also become representatives of the health sector at the kebele level of government, and as such are members of the kebele cabinet. They are expected to work in close collaboration with the Health Development Army of volunteers, to spend most of their time out in their respective kebeles educating communities on sanitation, antenatal care, postnatal care, providing immunization services, family planning and malaria diagnosis and treatment. They are expected to work in close collaboration with the health development army of volunteers. HEWs also document and send reports to their supervising PHCU.

**II. Case Study Goals and Objectives**

In collaboration with UI-FHS, the WoHO highlighted the need to better understand and document the contributions HEWs make to routine immunization (RI) services in Hintalo Wajerate.

**Objectives of the case study:**

- Explore the approximate amount of time a HEW spends on immunization activities per week
- Determine how HEWs plan and implement defaulter tracing strategies in their kebeles
- Explore strategies used for community mobilization for RI sessions
- Determine the strategies used for missed opportunities in RI
- Explore HEW training and education in RI

**III. Purpose of this Case Study**

Hintalo Wajerate is recognized as one of the best health performing woredas in Ethiopia, leading the UI-FHS project to explore the reasons behind the woreda's success, particularly in implementing quality health practices within its communities. The HEWs in Hintalo Wajerate form the base of the primary health care system, and consistently perform at exceptionally high levels. Promising findings from this
case study are intended to be used to scale up practices currently being implemented within Hintalo Wajerate with the idea of spreading these practices for adapted implementation in other woredas.

IV. **Woreda Demographics**

Hintalo Wajerate woreda is located in the south eastern zone of Tigray, which covers an area of 193,309 hectares and includes 22 kebeles with an estimated total population of 181,274.⁴ There is only one rainy season in Tigray, falling between the months of June and August. By definition, 95% of the residents within Hintalo Wajerate are classified as rural, while the remaining five percent are urban.⁵ The WoHO has a functional PHCU system, which has a total of seven HCs and eighteen HPs that report to the WoHO. The town of Adigudom is the center for all woreda offices, which is about 36 kilometers from Mekele, the regional capital.

V. **Study Population Demographics**

The UI-FHS team, with the assistance of the WoHO, took an investigative approach in choosing six HPs for this case study. Three HPs were recognized by the WoHO as “high preforming” health facilities while two of the HPs were considered “underperforming” as determined by the WOHO. The performance criteria of the HF is analyzed quarterly by the WoHO on four main topics: community led total sanitation (number of latrines), family planning, institutional deliveries, and WHDAs. One additional HF was chosen as a trial HF for the questionnaires and observations to determine if the questions and observations were relevant for this case study. The trial HP data was included in this case study because the information was considered relevant and could add to the analysis of these findings. The six HPs chosen for this study are anonymously labeled (for the protection of all participants) as: HP 1, HP 2, HP 3, HP 4, HP 5, and HP 6.

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⁴ Source: Hintalo Wajerate woreda health office
⁵ Source: Rapid Assessment done by UI-FHS
Table 2: Descriptive Characteristics of Case Study Health Posts

<table>
<thead>
<tr>
<th>Name of HP</th>
<th>Total Population</th>
<th>Total HH</th>
<th>Number of HEW at HP</th>
<th>Number of years of most experienced HEW in HP</th>
<th>Distance from WoHO (kilometers)</th>
<th>Outside Assistance</th>
<th>Performance Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 1</td>
<td>9,323</td>
<td>2,118</td>
<td>2</td>
<td>&lt;5 years</td>
<td>28</td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>HP 2</td>
<td>6,701</td>
<td>1,522</td>
<td>2</td>
<td>&lt;5 years</td>
<td>45</td>
<td>L10K(^6)</td>
<td>Low</td>
</tr>
<tr>
<td>HP 3</td>
<td>9,159</td>
<td>2,081</td>
<td>2</td>
<td>&gt;1 year</td>
<td>30</td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>HP 4</td>
<td>7,421</td>
<td>1,686</td>
<td>1</td>
<td>&gt;1 year</td>
<td>20</td>
<td>REST (phased out)</td>
<td>High</td>
</tr>
<tr>
<td>HP 5</td>
<td>8,986</td>
<td>2,042</td>
<td>2</td>
<td>&lt;5 years</td>
<td>11</td>
<td>REST (phased out)</td>
<td>High</td>
</tr>
<tr>
<td>HP 6</td>
<td>5,706</td>
<td>1,296</td>
<td>2</td>
<td>&lt;5 years</td>
<td>6</td>
<td>L10K, REST (phased out)</td>
<td>High</td>
</tr>
</tbody>
</table>

HP 3, HP 4 and HP 5 have HEWs who have been employed in Hintalo Wajerate woreda for at least five years or more. However, many of these HEWs have been transferred to different HPs within the woreda but have remained working in Hintalo Wajerate. In the last two months, HP 2 and HP 6 have both had recent graduates transferred into the HP without the assistance of a more experienced HEW present to assist.

All HPs are accessible by car year round and located in the southern mountains of Tigray, known as the Raya zone. HP 2 is the only HP located on an asphalt road, ten kilometers outside the supervising PHCU.

VI. Methodology

This case study is an exploration of the current Ethiopian routine immunization policy and the RI activities currently executed in Hintalo Wajerate woreda, in the Tigray region. The case study team shadowed six HEWs in their respective kebeles for five days of observations. The observations were performed before, during, and after vaccination sessions (all were outreach sessions). Towards the end of each week, the case study team conducted IDI with each HEW to clarify and expand on the data collected during the observation portion of the week. During each RI session, additional informal questions were asked to mothers/caretakers who attended the RI session as a cross reference.

The two qualitative data collection methods employed were IDIs to explore the activities of RI by the HEWs, and observations to assist with validity and reliability. The benefit of observation allows the observer the opportunity to personally experience how a process happens—rather than relying on information from others and their perceptions. The quality of this data is dependent on the continued natural flow of the environment or activity. This technique also validates interview data that is collected.

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\(^6\) L10K is a JSI implemented project created to address the severe human resources deficit in Ethiopia. L10K is a technical support and grants project designed to build the capacity of existing local organizations, woredas, communities, and households to fully contribute to improving Ethiopia’s reproductive, maternal, neonatal, and child health.

\(^7\) REST or the Relief Society of Tigray is an Ethiopia-based NGO in Tigray helping to eradicate poverty in Ethiopia.
through IDIs. These two types of qualitative methods created the foundation for triangulated qualitative data collection.

**Table 3: Target Groups**

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Method</th>
<th>Total Number of People Interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEWs</td>
<td>Individual Interviews</td>
<td>5</td>
</tr>
<tr>
<td>WHDA (Women’s Health Development Army)</td>
<td>Informal discussions and observations</td>
<td>4-6</td>
</tr>
</tbody>
</table>

**Table 4: Topics Covered in Interviews**

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Topics Covered In Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HEWs</strong></td>
<td>Time commitment for immunization activities</td>
</tr>
<tr>
<td></td>
<td>• Overall preventive education services</td>
</tr>
<tr>
<td></td>
<td>• Wasted time</td>
</tr>
<tr>
<td></td>
<td>• Time spent on RI services</td>
</tr>
<tr>
<td></td>
<td>Training and education of immunization procedures</td>
</tr>
<tr>
<td></td>
<td>• Initial vocational and education training</td>
</tr>
<tr>
<td></td>
<td>• Additional trainings relating to RI</td>
</tr>
<tr>
<td></td>
<td>Defaulter tracing strategies</td>
</tr>
<tr>
<td></td>
<td>• How do HEWs plan and implement defaulter tracing strategies</td>
</tr>
<tr>
<td></td>
<td>• Who assists with defaulter tracing</td>
</tr>
<tr>
<td></td>
<td>Community mobilization strategies</td>
</tr>
<tr>
<td></td>
<td>• How notifications are done for following immunization appointments</td>
</tr>
<tr>
<td></td>
<td>• Challenges faced with current immunization procedures in remote areas</td>
</tr>
<tr>
<td></td>
<td>Missed opportunities for routine immunization</td>
</tr>
<tr>
<td></td>
<td>• Open vial policy application</td>
</tr>
<tr>
<td></td>
<td>• Most common reason a child does not get immunized</td>
</tr>
<tr>
<td><strong>WHDA</strong></td>
<td>Defaulter tracing strategies</td>
</tr>
<tr>
<td></td>
<td>• Roles in defaulter tracing</td>
</tr>
<tr>
<td></td>
<td>Community mobilization strategies</td>
</tr>
<tr>
<td></td>
<td>• Roles in mobilizing women with children of immunization age</td>
</tr>
<tr>
<td></td>
<td>• Not attending an immunization session</td>
</tr>
<tr>
<td></td>
<td>• Protocol at an outreach site</td>
</tr>
<tr>
<td></td>
<td>Missed opportunities for routine immunization</td>
</tr>
<tr>
<td></td>
<td>• Reasons for a child to be turned away from an immunization activity</td>
</tr>
</tbody>
</table>

**A. Selection of health posts**

To select the health posts, the case study team first contacted the disease and prevention expert and HEW expert at the WoHO and then collected demographic information and performance indicators from all HPs. The WoHO analyzed HP performance criteria in four areas: community-led total sanitation (number of latrines), family planning, institutional deliveries, and women health development armies.
The team used the results to narrow down which HPs to use for this case study. The team then reviewed and discussed the results with the UI-FHS field immunization manager in Tigray and the WoHO head supervisor. Together, they finalized the selected list of HPs.

**B. Data collection**

Initially, the case study team coordinated introductions through the PHCU director, HEW supervisor, and EPI focal person (if available at the supervising PHCU) to make sure the supervising PHCU was aware of the work the case study team was doing at the HPs. These introductions were done using a consultant interpreter familiar with the woreda. Informal discussions at the immunization sessions were held among women/caretakers of the communities and were used as a cross-reference to the IDIs. At the beginning of each IDI written, informed consent was obtained.

**C. Data analysis**

Interviews were directly translated and transcribed from English into Tigrinya (local language for the Tigray region) during the interviews to ascertain all information was being collected. The transcripts were entered into the qualitative data analysis software, Weft, which aids in qualitative analysis. The transcripts were then reviewed and edited for the purpose of this case study.
VII. Findings

Through analysis of interviews and informal discussions as well as observations of HEW weekly activities, key themes and activities developed. This included how defaulter tracing was implemented, what the main causes are for missed opportunities in RI, perception of time spent on RI, and community mobilization strategies.

Table 5: Summary of Results

<table>
<thead>
<tr>
<th>Topics</th>
<th>HEWs</th>
<th>WHDA (women of the community)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEW education and continued trainings</td>
<td>• Technical and vocational education on immunizations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Continued trainings on RI services</td>
<td></td>
</tr>
<tr>
<td>(Perception) time commitment of immunization activities</td>
<td>• Time spent on RI services</td>
<td></td>
</tr>
<tr>
<td>Default tracing strategies</td>
<td>• Reports to the WHDA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reports at the “Tsebels”⁸</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reports to the kebele administration</td>
<td></td>
</tr>
<tr>
<td>Community mobilization strategy</td>
<td>• Awareness about immunization by all women</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Spiritual leader approval/awareness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The vaccination session falls on the same “holiday⁹” every month in this koshet¹⁰</td>
<td></td>
</tr>
<tr>
<td>Missed opportunities for RI</td>
<td>• Not enough eligible children to open a Bacille Galmette-Guerin (BCG) vaccine</td>
<td>• Syringe shortage (BCG &amp; syringes used for other vaccines)</td>
</tr>
<tr>
<td></td>
<td>• 45 days or christening “religious beliefs”</td>
<td>• Not enough eligible children to be vaccinated for multi dose vials to be opened (BCG vaccine).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Absence of a HEW at a vaccination session</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 45 days or christening “religious beliefs”</td>
</tr>
</tbody>
</table>

⁸ A Tsebele is a gathering of the leaders from the Women Health Development Armies with the HEWs to discuss the health extension package topics. It is usually held on one of the Ethiopian Orthodox monthly saints holidays.

⁹ In Hintalo Wajerate woreda all vaccination sessions are held on one of the “easy to remember” monthly Ethiopian Orthodox saints holidays.

¹⁰ Koshet is a sub-unit of a kebele.
A. HEW education and continued training

The immunization-related training a HEW receives during her diploma years is minimal and very heavily based on theory. The topics include diseases prevented, injection techniques, benefits of vaccines, and side effects caused by vaccines. All HEWs interviewed reported very little clinical/practical experience during their schooling. HEWs who had one year or less of experience reported there were two months of clinical time at the end of one year of schooling. The two months of clinical work was broken down into two parts; the first month was dedicated to following a nurse, the second, to following a HEW. Five HEWs from this case study were part of the original wave of HEWs trained in Ethiopia; as these HEWs were the first cohort, they observed nurses during their clinical experience, not other HEWs. Clinical immunization topics included properly administering subcutaneous and intramuscular vaccinations, practicing injection site locations and techniques, and implementing proper cold chain procedures.

In addition to the initial pre-service training on immunization services, the HEWs spoke about continued education and in-service training. The following statements illustrate this:

“There has never been separate immunization trainings until Haile\textsuperscript{11} came, but when I go to trainings at the WoHO there would be information provided about immunizations. The new information was normally about the addition of new vaccines.” (HP 1)

“There has been no formal training but some basic on the job trainings. There was a campaign against measles and (our supervisor) gave a half day training and a one-day training on the addition of the new PCV vaccine.” (HP 6)

“The WoHO provided training on the importance of establishing relationships between all sectors in the administrations. There was a defaulter tracing training on how to list all children and training on how to convince mothers to bring their children. There was also a PNC training discussing the importance of following children under one and under five years old.” (HP 2)

HEWs who had participated in the immunization related quality improvement (QI) training conducted by UI-FHS reported that the trainings were beneficial. The HEWs have also seen improvements in cooperation from their string\textsuperscript{12} committees and kebele administrations and an increased support for defaulter tracing. The following statements show the increased support of the QI trainings:

“The QI-training that Haile gave with the kebele leaders and string committee members helped in supporting the activities I do. I now report defaulter children during the string committee meetings and if a member of the string committee knows the mothers, they will go and talk with them.” (HP 5)

\textsuperscript{11} Haile is the UI-FHS field immunization manager in Hintalo Wajerate Woreda

\textsuperscript{12} A string committee is referred to in many other areas of Ethiopia as a command post and can be found at various lower levels of the Ethiopian government. The string committee is made up of different government sector representatives at the kebele level and they assess and assist with community needs.
“We used to report the defaulter children to the WHDA but now we report defaulter children to the EPI committee which is made up of members from the kebele administration and string committees. The defaulter children are reported in a notebook and then we assign each member of the EPI committee to a certain number of defaulters, who are supposed to go inform the mother of the missed session.” (HP 1)

Enhancing the administrative relationships in all sectors divides the workload among several members of the sectors.

**B. Time commitment with immunization activities**

Based upon observation, a HEW in Hintalo Wajerate can divide her time into five categories: maternal health, sanitation activities, HP activities, vaccination services, and meetings. Maternal health and sanitation activities are conducted out in the field by doing house to house visits. Meanwhile, HP activities can be sub-divided to include dispensing of family planning, malaria prevention and control, and basic first aid. The graph below depicts a HEW’s weekly activities, based on those involved in this case study.

**Figure 2: Average Time Analysis of Weekly Activities conducted by Hintalo Wajerate HEWs (n=5)**

As the figure above indicates, HEWs in this case study spend, on average, 31% of their time a week in meetings, while the amount of time spent out in the community providing services and education was 34% (maternal health, sanitation, vaccination sessions). Of the time a HEW is out in the communities
34%), approximately half that time is devoted to vaccination services. The HEW spends approximately one day a week on vaccination sessions. According to the FMOH, in the HEP Profile it states,

“HEWs are required to spend 75% of their time conducting outreach activities by going from house to house.” (FMOH Health Extension and Education Center, 2007)

“HEWs are supposed to be out conducting house to house visits 3-5 days a week. When out in the community all work is done integrally working on all HEP components.” (WoHO Expert)

Findings from this time analysis show that HEWs spend less than 35% of their time conducting outreach services and are having difficulty following the current FMOH guidelines.

The data suggests that with all the other HEW responsibilities, current guidelines may not be practical for most HEWs.

Furthermore, while one of the main objectives of the establishment and implementation of the HEP was to “improve the utilization of peripheral health services by bridging the gap between the communities and health facilities through HEWs” (FMOH Health Extension and Education Center, 2007), this shows how HEWs have to maintain a delicate balance in their roles and responsibilities as a HEW. Depending on the demographics of a kebele, a HEW could conduct as few as three outreach sessions or as many as six sessions a month. Hintalo Wajerate woreda in collaboration with HEWs and kebele administration have decided on optimal locations for outreach sessions. Originally they did an analysis of the woreda by creating maps, determining hard to reach areas, and number of eligible children. This has allowed HEWs to reach as many eligible children as possible without a delay in services and without being so overly ambitious that it interferes with their other HEP responsibilities.

Furthermore, a time analysis of each vaccination session was done to identify how much time was spent at each outreach location (see Table 6 below). It was also observed that during a vaccination session, a HEW would update the immunization register, create new vaccination cards for clients and update existing cards, and administer vaccines.

**Table 6: Time Analysis of a Vaccination Session**

<table>
<thead>
<tr>
<th>Name of HP (and performance rank)</th>
<th>HEW arrival time at vaccination site</th>
<th>End time of vaccination session</th>
<th>Total time spent at vaccination session (hours)</th>
<th>Estimated walk time from HP to vaccination location one way (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 2 (low)</td>
<td>7:30am</td>
<td>1:00pm</td>
<td>5.5</td>
<td>.75</td>
</tr>
<tr>
<td>HP 3 (high)</td>
<td>9:30am</td>
<td>1:30pm</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td>HP 4 (high)</td>
<td>9:00am</td>
<td>1:30pm</td>
<td>4.5</td>
<td>.75</td>
</tr>
</tbody>
</table>
Based upon a time analysis of each outreach session, HEWs spend on average five and a half hours at the location of the session and another two and a half hours round trip walking from the HP to the outreach site.

It is also important to note that half of the outreach sessions already had mothers waiting for the HEWs to arrive. The other half had mothers beginning to arrive by 8:30 AM. These practices allow HEWs to begin the vaccination process immediately upon arrival, which resulted in less wait time for mothers. The mothers overall seemed to be aware of the importance of early arrival at immunization sessions.

As with the HEW weekly time analysis, house to house visits conducted by HEWs can be divided by time spent walking, time spent in each household, and amount of time spent for lunch. Below is a daily time analysis of house to house visits completed by a HEW.

**Figure 3: Average number of hours spent by Hintalo Wajerate HEWs conducting house to house visits (n=5)**

<table>
<thead>
<tr>
<th>HEW's daily Activities</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Walking to/ from the koshet (4)</td>
<td>Walking from house to house (3.5)</td>
<td>7.5 hrs</td>
<td></td>
</tr>
<tr>
<td>Delivering services to households</td>
<td></td>
<td>3.5 hrs</td>
<td></td>
</tr>
<tr>
<td>Coffee/ Lunch</td>
<td></td>
<td>1 hr</td>
<td></td>
</tr>
</tbody>
</table>

As illustrated in the graph above, a HEW spends approximately seven and a half hours a day walking when out in the community. Because the HEWs in this study spend so much time walking, they are required to work up to twelve hours a day when conducting house to house visits. This leaves an
estimated three hours spent in the households educating and providing other health related services. As a result, the quality of care and educational support a HEW can provide to a household is limited.

**C. Community mobilization**

Community mobilization is a process in which a community identifies a problem, creates awareness about this problem, establishes a plan of action, and evaluates its own actions resulting in a change in the behavior of the community. Community mobilization begins with providing adequate knowledge about topics and results in active community change. In Hintalo Wajerate WoHO staff, PHCU staff, religious leaders, and kebele administration have worked collaboratively to educate the rural communities about the importance of immunization. While community mobilization and awareness begins with the HEWs, they will not be successful in mobilizing communities without the support of their kebele administrators, PHCU staff, and religious leaders.

In addition to the PHCU staff, the WoHO experts have also provided additional health training to kebele administrators and religious leaders. The topics of these trainings include sanitation services, institutional deliveries, and vaccination services. WoHO experts provide health awareness to kebele administrators and religious leaders to assist HEWs in communities.

> “The priest leaders are very aware (about immunization services) and they are educating the other priests.” (HP 5)

> “Most priests are in support of immunization services and were trained by the WoHO. (Ethiopian) Orthodox members are bound by their priests.” (HP 6)

It was evident through observation that rural Tigray communities have very strong religious beliefs, going to religious leaders regularly for guidance and advice. The Hintalo Wajerate WoHO experts observed the activities of the religious leaders and came to the conclusion that these religious leaders could be beneficial in assisting with community mobilization. Since the training, HEWs have continued to rely on community religious leaders to assist in creating awareness as it relates to RI services. This is illustrated through the following statements:

> “Each priest has a group of spiritual children; the priests travel to the house of the new infant and talk about vaccines and that the church supports vaccination services.” (HP 1)
“The priests will tell the mother she is not a child of God if she does not give birth in an institution or if she does not vaccinate her child.” (HP 6)

As a result of this connection and continued education supported by religious leaders, almost all the women of Hintalo Wajerate have been reached and are aware of the importance of vaccinating their children.

Creating awareness among the religious leaders in Hintalo Wajerate was a pivotal point in full community mobilization and has benefited communities and HEWs alike.

While it was difficult to directly receive information about kebele administrations and string committees, it was apparent through observation that both of these organizations play a critical role in the provision of vaccination services in their communities. They are responsible for convincing mothers who are against vaccination services to bring their children for vaccination and assist with defaulter tracing. HEWs have also expressed increased support for vaccination services by kebele administrators and string committees following the RED-QI training conducted by the UI-FHS team.

“After the QI training, our HP has established an EPI committee which consists of kebele administrators who help me with defaulter tracing.” (HP 1)

“The way I find defaulter children has changed since the QI training; I report all defaulter children to the string committee at the bi-monthly meeting.” (HP 5)

The importance of creating awareness in lower level sectors of the Ethiopian government system helps to unify all sectors, even as it relates to health topics that are critical in creating community mobilization. The tight knit communities of Hintalo Wajerate listen to their kebele administrations, and as a result are moving toward communities with fully immunized children.

A best practice in Hintalo Wajerate woreda is the strategic scheduling of vaccination services. HEWs provide vaccination services on Ethiopian Orthodox saint holidays. These holidays happen on the same day of every month, which makes it easy for mothers to remember the date of the session. An added advantage to holding immunization services on recognized holidays is that Orthodox followers take a day of rest and are typically found at home on these days. In addition, the woreda has chosen central locations for communities to gather for vaccination services such as churches, schools, and sometimes around a large village tree. This has created consistency in when and where immunization services are provided in each koshet. The women in the communities are aware of these dates and locations and continue to inform new mothers of this information. This system works in Hintalo Wajerate woreda because a large majority of people are Orthodox—but may not work as well elsewhere.

13 Koshet is a subunit of a kebele, there are approximately four koshets in a kebele.
D. Defaulter tracing for children not completing their vaccination schedule

Defaulter tracing is a dynamic process that is unique to each kebele in Hintalo Wajerate. Each HEW has established her own strategy for tracing defaulter children, which is dependent on level of support from WHDAs, kebele administrations, geographical location, and overall general knowledge of the community. Mothers in Hintalo Wajerate perceive RI services to be beneficial and effective for the health of their children. During the case study, high numbers of mothers and infants were observed to be in attendance at an outreach session, with relatively low numbers of defaulter children after a session. Hintalo Wajerate has already created awareness about immunization, resulting in low numbers of defaulter children. However, after reviewing each koshet’s immunization registration books there were still cases of defaulter children found.

i. Reasons for not attending vaccination sessions during the first months of life

Due to strong religious beliefs prevalent in Tigray, it is still a common practice to delay vaccinating a child until 45 days after birth or until the child has been christened. For most female infants, vaccination would not begin until 80 days after birth and for male infants, vaccination would not begin until 40 days after birth. If a mother delays an infant’s vaccination schedule it puts the child roughly five to six weeks behind schedule, leaving infants exposed to various vaccine preventable diseases. The table below illustrates the Ethiopian vaccination schedule.

Table 7: Ethiopia’s Vaccination Schedule

<table>
<thead>
<tr>
<th>Age</th>
<th>Antigen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth</td>
<td>Bacille Galmette-Guerin (BCG) &amp; Oral Polio Vaccine (OPV) 0</td>
</tr>
<tr>
<td>6 weeks</td>
<td>Pentavalent 1, OPV 1, Pneumococcal Conjugate vaccine (PCV) 1, Rotavirus (Rota) 1</td>
</tr>
<tr>
<td>10 weeks</td>
<td>Penta 2, OPV 2, PCV 2, Rota 2</td>
</tr>
<tr>
<td>14 weeks</td>
<td>Penta 3, OPV3, PCV 3, Rota 3</td>
</tr>
<tr>
<td>9 months</td>
<td>Measles</td>
</tr>
</tbody>
</table>

The HEWs from HP 1 and HP 5 mentioned that in the past year, they have seen an increase in women who bring their children to receive vaccines earlier in life. The HEWs from HP 5 also said, “the more that priests become aware of the importance of vaccination services, the more they educate the women to bring their children earlier.” This religious practice has made it difficult to identify “left out” infants as there is not a systematic approach for following children after birth but before the christening date, which creates a gap in identifying left out children.

ii. Reasons mothers miss vaccination sessions

The most common reason for missing an immunization session, reported by the HEWS, was the “forgetfulness” of a mother to return to the next immunization session. Meanwhile, the mothers
maintained that the most common reason for missing a vaccination session were funerals or christenings. Funerals in rural communities are unscheduled events that typically take greater priority over any other event in the community, resulting in more missed vaccination sessions by infants. Christenings, on the other hand, are “invitation only” activities and happen early in the day—not interrupting vaccination sessions. During the case study, a funeral took place during the time of a vaccination session, which resulted in many of the women showing up late to the session with some children unable to receive the BCG vaccine. The HEW was not able to administer the BCG vaccine, as there was a shortage of BCG syringes and low numbers of eligible children to open another vial (less than seven children). In addition, it was also observed by HEWs in HP 2, HP 4, and HP 5 that it was harvesting season in Hintalo Wajerate, which led to women assisting with the harvest and missing the vaccination session.

Furthermore, HEWs from all kebeles discussed one major challenge, the “irritated child” syndrome. Mothers are unhappy when their son or daughter is being irritated by an unnatural substance injected into the child’s body. Most HEWs said this was a rare cause for mothers not to return for subsequent vaccines but is still a challenge in this area.


Documentation in an immunization registration book is critical for determining which children have defaulted in each koshet. In Hintalo Wajerate, each koshet had its own registration book (this is different from many other locations, where there is one registration book for the whole kebele). There were a few exceptions where HEWs provided examples of neighboring koshets that used the same registration book. In koshets that had an hour or more walk for an outreach session, registration books were kept at the rental house of the HEWs or at a home of a trusted member of the community. HEWs said, “the reason for this was that the books were heavy and difficult to carry.” For koshets that were located closer to the HP, registration books were found at the HPs.

Of the HPs involved in the case study, HP 2 was the only HP that kept all registration books at their HP. In place of the woreda-provided EPI registration books, the HEWs had a small “master notebook” that they carried to each outreach session. The HEWs at HP 2 said the reason for this was because they did not want to tear the pages of the registration book and that the books are heavy to carry. In addition, this process made it easier for the HEWs to use because all information was stored in one place and they did not run the risk of registers losing pages and therefore losing EPI data.
The HEWs of HP 4 have developed a unique approach to using the WoHO provided EPI registers. Instead of taking the EPI registers with them to outreach sessions, they have replaced the EPI registers with a “master notebook.” The HEWs stated, “the EPI registers provided were large and heavy to carry.” The master notebook is a small light weight exercise book that is used to transfer and transcribe immunization data from the EPI registers which are kept safely at the HP.

Steps HEWs take to utilize the “master notebook” system in Hintalo Wajerate I.

1. Necessary vaccination information (name of child, antigens/doses needed, location, registration number) is inserted into the exercise book the day before a vaccination session
2. During the vaccination session, as children come to receive vaccines, the child is checked off the list
3. As new infants or children come to receive vaccines, they are added to the bottom of the list (bottom part of the recreated master notebook page)
4. Upon return to the HP after the vaccination session all information is transcribed directly into the EPI register

Instructions for re-creation of the “master notebook data” entry

- The top of the page is transcribed from the EPI register and includes; children who need additional vaccines and defaulter children. Should include: Name of child, antigens needed, location, register number
- The checkmarks indicate which children have already come to receive their vaccines
- The bottom of the page includes new children who come for their first round of vaccines
- The name and date of vaccination session are important for transcription and data quality

<table>
<thead>
<tr>
<th>ADIGUDOM KEBELE</th>
<th>21/02/06</th>
</tr>
</thead>
<tbody>
<tr>
<td># Name of Child</td>
<td>Antigens/ Doses</td>
</tr>
<tr>
<td>1 Yosef</td>
<td>P2, PCV2</td>
</tr>
<tr>
<td>2 Nebiet H/Teklu</td>
<td>Measles</td>
</tr>
<tr>
<td>3 Abera W/Gebrial Worku</td>
<td>P3, PCV3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NEW COMERS</th>
<th>21/02/06</th>
</tr>
</thead>
<tbody>
<tr>
<td># Name of Child</td>
<td>Mothers name</td>
</tr>
<tr>
<td>1 Elias Ayid Mohammad</td>
<td>Tsega Hafom</td>
</tr>
<tr>
<td>2 Mariam Haile Kiros</td>
<td>Arsema Meles</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Important to Note:
A high level of commitment is critical for transferring and transcribing documentation
All immunization documentation is transferred into one “master notebook.”
The flow charts below illustrate the differences in data collection systems.

**Figure 4: Typical procedure when using the EPI Register**

1. HEW conducts a vaccination session
2. The EPI register is collected upon arrival at the outreach vaccination site
3. HEW uses EPI register during vaccination session
4. Tally sheet is recorded during vaccination session and taken back to HP for monthly records
5. HEW leaves EPI register in koshet

**Figure 5: HP 4’s Procedure when using the “master notebook” in combination with the EPI**

1. HEW conducts a vaccination session
2. At vaccination session HEW writes the name, date of birth, and vaccinations provided to all new infants who attended the session in the “master notebook”
3. Tally sheet is recorded during vaccination session. Tally sheet and “master notebook” are taken back to HP
4. HEW upon returning to the HP transfers all newly vaccinated infants into the EPI register
5. The day before the following month’s vaccination session HEW transcribes all children who need vaccines into the “master notebook” for that koshet including defaulters and expected
6. HEW conducts another vaccination
7. In the “master notebook” the HEW checks off the returning children when vaccines are given and writes in new infants in attendance
Analysis of the flow charts suggests that both systems of registering children are effective. HEWs from HP 2 have added an additional step to their data collection (transferring data from “master notebook” to EPI register), but as long as they are committed to transferring and transcribing data, it is an effective means of documenting all children. There are a few additional benefits to the HP 2 “master notebook” system that was observed by the case study team but not mentioned by the HEWs. It allows all immunization documentation and registration books to be kept at the HP for referencing and it forces the HP 2 HEWs to review their immunization documentation before each outreach session, resulting in better knowledge of who should be in attendance at the next session.

It was observed that HEWs of Hintalo Wajerate were very meticulous in registering new children who received vaccines and adding to previous data when children were receiving second and third doses. Based upon review of the registration books, the HEWs of Hintalo Wajerate could also point out where there were defaulters from previous sessions, suggesting proper use of the registration books.

The importance of having two HEWs at an outreach session is illustrated through the following statement:

“It’s important to have two HEWs present because of the workload but it was possible for one HEW to do it all.” (HP 2)

In reviewing the registration book at HP 5, there were missing dates from previous sessions; the HEW stated the reason for this was:

“Previously, there was only one HEW assigned to this HP and the workload was very difficult for her to do alone.” (HP 5)
During HP 5, HP 3 and HP 2 outreach sessions, it was observed that if there were two HEWs present, one HEW would provide the injections or drops, while the second HEW could document the vaccination, resulting in more accurate documentation and smoother flowing sessions.

iv. After a vaccination session

Defaulter tracing after a vaccination session is a dynamic process that is unique to each kebele in Hintalo Wajerate. Each HEW has established her own strategy for tracing defaulter children, which is dependent on the level of support from WHDAs, kebele administrations, geographical location, and overall general knowledge of the community. Below is a flow chart that depicts methods a HEW can use to implement defaulter tracing.
Figure 6: Analysis of Defaulter Tracing Strategies Used by HEWs

HEW conducts an outreach session.

On her walk to the vaccination site, the HEW reminds the women of communities of the vaccination today. (This is usually done through yelling to women out in their compounds.)

Half way through the vaccination day the HEW refers back to the registration book/data and determines if she is still missing infants.

A woman at the vaccination session who is there to assist the HEW will run and fetch the mothers who still have not attended.

HEW reminds mothers who have already attended the vaccination session to “pass the word” along to their neighbors that there is a vaccination session today.

After the vaccination session the HEW writes on a sheet of paper the names of the defaulter children and provides those names to the string committee at the next meeting. (These meetings are usually held two times a month.)

A member of the string committee who is also a neighbor of the mother/infant relays the information of the missed vaccination session to the mother.

After the vaccination session the koschet holds the “Tsebel” (a meeting) for the 1-5 networks of the koschet.

HEW can announce at the “Tsebel” the names of the defaulter children to the 1-5 networks and the women can inform the mother/infant of the missed vaccination session.

Usually by “word of mouth” the defaulter mother/infant is informed of the missed vaccination session.

Mother comes to following immunization session.
v. Similarities between defaulter tracing strategies

All HEWs reported using women of the community to report defaulter children. Most women in Hintalo Wajerate belong to a WHDA, so in essence, this is a way the WHDA is used to search for defaulter children. This is not a formal process and typically no paper trail is associated with the use of the WHDAs for defaulter tracing. Experienced HEWs (five or more years of on the job experience) would write the names of defaulters on a piece of paper or in a notebook, and when they would meet a woman in the community while walking to or from or at a vaccination session, they would ask her if she knew the mothers of the defaulter children. If the woman said yes, the HEW would report the defaulter mother/infant to that woman and by word of mouth the defaulter mother would be notified of the missed session.

In addition to reporting defaulter children to women of the communities, it was observed at most outreach sessions that there was a woman “community assistant” who attended all sessions at that site and assisted the HEW.

Community assistants are appointed by the kebele administrations to assist the HEWs with immunization sessions.

These “community assistants” knew the women of the community well and were advocates of the HEP. HP 2, HP 4, HP 5, and HP 6 outreach sessions all had these “community assistants” and they were used in finding defaulter children.

The HEW, about midway through the session, would review data and inquire about mothers who had not shown up to the vaccination session yet.

These “community assistants” would immediately run from the session to remind the mothers of the vaccination session. It was observed that these “community assistants” told young children who knew the household to pass the word on to mothers about the session happening that day. Usually, within 30 minutes to an hour depending on distance, the mothers would arrive.
HEWs who participated in the RED-QI\textsuperscript{14} training from UI-FHS also reported a second similar defaulter tracing strategy involving kebele administrative members and string committee reporting. After an immunization session, the HEWs who took the QI-training would write on a piece of paper the names of the defaulter children and report those names to the string committee.

One of the HEWs said, “part of the reason I inform the string committee is so they are aware of mothers who refuse services because otherwise I become responsible for the sickness and death of a child.” After the names had been reported to the string committees, different kebeles implemented different strategies for finding defaulter children.

Kebele 1 established a separate EPI committee including members of the string committee. Initially the HEW created a “defaulter notebook.” The “defaulter notebook” was just a list of defaulter names from kebele 1 that were transcribed from the EPI register.

Additional Roles and Responsibilities of Community Assistants

**Before a vaccination session:**
- Keep a documented list of pregnant mothers in the koshet (even if it’s by memory).
- Keep a documented list of newly born infants in the koshet (even if it’s by memory).
- Remind mothers who have vaccine eligible children of the vaccination dates.

**During a vaccination session:**
- Holds the infant (some mothers are afraid/don’t like the needle but know the vaccine is important and the community assistant also knows the proper holding technique so the HEW can safely administer the vaccine).
- In the middle of a vaccination session, can go and remind mothers who have not arrived to the session yet.

**After a vaccination session:**
- Finds defaulter children: The names of the defaulter children can be relayed to the “community assistant” and it is her responsibility to go to the house of the defaulter child and either remind the mother of the missed session or find out why the mother is not bringing her child for vaccinations.

The string committee then becomes responsible to help the HEWs find defaulter children.

One of the HEWs said, “part of the reason I inform the string committee is so they are aware of mothers who refuse services because otherwise I become responsible for the sickness and death of a child.” After the names had been reported to the string committees, different kebeles implemented different strategies for finding defaulter children.

Kebele 1 established a separate EPI committee including members of the string committee. Initially the HEW created a “defaulter notebook.” The “defaulter notebook” was just a list of defaulter names from kebele 1 that were transcribed from the EPI register.

After the “defaulter notebook” was complete, each member of the EPI committee would take a certain number of assigned defaulter children and he/she would become responsible for those defaulter children.

\textsuperscript{14} Additional information on RED-QI can be found in Annex 1.
As a result of the Quality Improvement (QI) trainings facilitated by UI-FHS the kebele administrators in Hintalo Wajerate have established EPI committees consisting of members from the kebele administrative committee and the HEWs of the kebele, to address problems relating to routine immunization, with a particular focus on addressing the issue of drop outs. A defaulter tracing notebook was created by HEWs for use by the EPI committee to track children who have fallen behind in their immunizations. The HEW ensures that this notebook is updated regularly. This additional sub-committee has been found effective in following up on drop out children in Hintalo Wajerate.

### Re-Creation of the Defaulter Tracing Notebook

<table>
<thead>
<tr>
<th>#</th>
<th>Name of Child</th>
<th>Location</th>
<th>Responsible Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yared G/Michael</td>
<td>gott1</td>
<td>HEW</td>
</tr>
<tr>
<td>2</td>
<td>Fikirta Mungustu</td>
<td>gott3</td>
<td>Committee mem. 1</td>
</tr>
<tr>
<td>3</td>
<td>Roweana Kiros</td>
<td>gott1</td>
<td>Committee mem. 2</td>
</tr>
<tr>
<td>4</td>
<td>Robel Haile</td>
<td>gott2</td>
<td>HEW</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### How HEWs Established and Utilize the Defaulter Tracing Notebook:

1. HEWs determine whether drop out is an issue for your community (the EPI committee in this instance saw high drop out from Penta 1 to Measles).

2. Based upon reviewing current and back pages of the EPI register; HEWs determine which children have defaulted (have dates for BCG or Penta 1, but none for Penta 2, Penta 3, or Measles, depending on the age of the child).

3. HEWs transcribe names and address (gott) information into the defaulter tracing notebook.

4. At an EPI committee meeting organized and called by HEWs, divide the defaulter list of names among committee members, assigning a certain number of children to each member of the committee based on, how close an EPI committee member lives to the gott of that child, knowledge of the family, etc.

5. Each member is then responsible for their assigned children and must go to the house of the defaulter child and find out why the child has not come for the rest of their vaccines and remind the mother of the following vaccination session.

6. Members then report at the next committee meeting what actions they have taken with the children assigned to them and the HEW reports if any of those children remain as defaulters.
In kebele 5, the HEW would write down the names of the defaulter children on a piece of paper and report those names at the string committee meeting. If a member of the committee knew those mothers, it would be his/her responsibility to inform the mother of the missed vaccination session. This system was not as systematic as HP 1’s defaulter tracing strategy.

HP 3, HP 4, and HP 5 all reported using “Tsebels” as a means of reporting defaulter children. “Tsebels” are meetings with refreshments held on an Ethiopian Orthodox saint holiday (every month) for the one to five networks of the WHDAs. In Hintalo Wajerate a “Tsebel” is held in each koshet of the kebele.

The names of the defaulter children are reported at the “Tsebel” and the mothers who are neighbors of the defaulter children inform the mother of the missed vaccination session. It was observed that during the harvesting season in Tigray, “Tsebels” become inactive due to the harvest. In addition, if HEWs were not present for a couple of months the “Tsebels” also became inactive. HEWs reported that the inconsistencies of these meetings made it difficult to keep the one to five networks motivated to work.
HOW TO ORGANIZE AND UTILIZE EXISTING VOLUNTEER COMMUNITY GROUPS FOR HEALTH EXTENSION WORKERS

What is a “Tsebel”

Traditionally, a “Tsebel” is a religious gathering held on Ethiopian Orthodox Saints Holidays, focusing on a themed topic (usually religious based). The HEWs in Hintalo Wajerate use the “Tsebel” as an opportunity to bring together the leaders of the 1-5 network to discuss HEP components.

Steps taken by HEWs to help organize a “Tsebel”

1. Determine which day, time, and location will best suit the community.
2. Communicate with string committee council and kebele administrators about the purpose of the “Tsebel” (gather support for the activity).
3. Involve women’s affairs representative of the kebele if possible.
4. Spread word to the 1-5 network leaders of the koshet.
5. Determine who is going to provide refreshments.
   - Refreshments typically consist of: coffee, sugar, hambasha (local bread), tella (local alcoholic beverage), honey, etc.
6. Create an agenda:
   - With refreshments, the HEWs usually set up a rotating system for hosting the event at their house. The HEW is also included in the rotation.
   - Typically, this is where the HEW collects information relevant to the HEP.
     - Number of pregnant women, number of children >1, number of children >5, latrine construction, etc.
   - She also can give a basic teaching session on one of the HEP components if needed.

Key to Success

- Consistency and routine with gatherings valued by community local context/culture/religion is critical to keep everyone involved motivated.
- Allow the group members to determine rules and consequences.
- Decide who/how consequences are going to be followed up.

HELPFUL TIPS:

- Hold “Tsebels” on the same day as the vaccination session as it is the most time effective.
- For every vaccination session (outreach or static) hold a “Tsebel.” This should keep the size of the gathering to a relatively manageable number.

The health sector of Hintalo Wajerate wanted to find a way to reach its most rural and remote communities to provide preventative services. The WoHO, PHICUs and HEWs began to look for ways to reach these communities in a culturally appropriate way and found the answer to be through religion. The idea of a “Tsebel” is rooted in the Ethiopian Orthodox religion and an important part of the lives of the Tigrinyan people. The HEWs in Hintalo Wajerate have taken a powerful traditional practice and are utilizing it for health activities. This creative approach has helped HEWs communicate with their WHDAs regularly through locally valued systems, improved the collection of information and data, and expanded the knowledge base of the women in the community.
vi. Differences in defaulter tracing strategies

As reported above, each HF has its own strategy for defaulter tracing. The biggest difference observed in the execution of defaulter strategies was the experience level of an HEW. Two of the HPs had inexperienced HEWs (one year or less on the job experience) while four of the HPs had HEWs with five or more years of HEP experience. It was observed that the more experienced HEWs were better at executing their defaulter tracing strategies, as described in the HEW interview.

Experienced HEWs were diligent about reviewing the names in their registration books at the end of the vaccination session and reporting defaulters to either the “community assistants,” women of the community, or the string committees. These experienced HEWs were much more aware of the time and how many mothers still needed to attend the immunization session.

In addition to implementation of the defaulter tracing strategies, HEWs with more experience spent more time individually with each mother on interpersonal communication. It was observed that the HEWs from HP 4, who were among the most experienced in Hintalo Wajerate, really took their time with each mother to explain when she needed to return to a vaccination session, why the “yellow” vaccination card was important to keep and bring to every session, and which vaccines fight against which diseases.

It is important to note that in this case study, the relationship between HEW experience and immunization coverage is unclear. We anticipated that in HPs with more experienced HEWs, immunization coverage would be higher and this was not necessarily the case. There could have been many possible reasons for this; first, it’s likely that several factors contribute to higher coverage and that HEW experience alone cannot determine whether coverage will increase. Second, it is possible that HEWs with less experience were transferred into higher performing kebeles, where coverage was already high. Third, the geographic location of the underperforming HPs are in hard to reach areas so despite having experienced HEWs, coverage was lower.

E. Open Vial Policy

The WoHO reported their open vial policy as, “A BCG vial should only be opened if there are seven or more eligible children present and a measles vial should be opened if only one eligible child is present.” This policy was established to reach as many infants as possible but also not to have excess waste of multi-dose vaccines.
Table 8: BCG Vaccine (20 dose vial)

<table>
<thead>
<tr>
<th>Number of eligible children present to open a BCG vial</th>
<th>Number of reporting HPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>After 7 children present</td>
<td>2</td>
</tr>
<tr>
<td>After 5 children present</td>
<td>3</td>
</tr>
<tr>
<td>After 10 children present</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 9: Measles Vaccine (10 dose vial)

<table>
<thead>
<tr>
<th>Number of eligible children present to open a measles vial</th>
<th>Number of reporting HPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Even if 1 child is present</td>
<td>2</td>
</tr>
<tr>
<td>1-2 children are present</td>
<td>2</td>
</tr>
<tr>
<td>After 2 children are present</td>
<td>1</td>
</tr>
<tr>
<td>2-3 children present</td>
<td>1</td>
</tr>
</tbody>
</table>

Based upon the reported data by HEWs, there seem to be inconsistencies as to when multi-dose vials are supposed to be opened. Observation during every outreach session revealed HEWs were accurate about the numbers they reported in the interviews.

i. Turning mothers away for multi-dose vaccines because of low numbers of eligible children

Observations at five outreach sessions revealed no mother was turned away due to low numbers of eligible infants in attendance for either the BCG or measles vaccination. It was observed that at each outreach session, at least one BCG vial had been opened and vaccines administered. At HP 2, the HEWs opened the BCG vial to administer vaccinations, even with fewer than five eligible infants present.

Mothers in Hintalo Wajerate are aware of timeliness when attending an immunization session. Most mothers arrived at the outreach session site at 9:00 AM. Many times, when the case study team and the HEW arrived at the session site, the mothers were already waiting. Timeliness of arrival at an outreach session is critical, as a HEW will use the number of eligible infants present to determine whether to open a BCG or measles vial. If all eligible infants are present, the HEW will know immediately whether or not to open a vial, which results in less waiting time for mothers.

At two of the outreach sessions, the case study team spoke with mothers who had returned for immunizations due to the lack of eligible children from the previous session. The mothers revealed there didn’t seem to be a problem associated with the return trip. This perception is illustrated through the following quotes:

“I had to come back anyway; my child needed more vaccinations.” (woman from Kebele 6)

“I’ve been coming for three months to get the BCG medicine (vaccine); there is no problem with returning. Sometimes it happens that a HEW cannot open the medicine (vaccine), this is because there are not enough children who need it, this is not the fault of the HEW.” (woman from kebele 5)

Further research is needed to understand the effects of turning mothers away from having their child vaccinated because there are not enough eligible children to open a vial. HEWs of HP 1 and HP 5 stated
the policy has changed recently and vials can now be opened with fewer children resulting in more children receiving the proper vaccines on time. As noted earlier, the WoHO reported their current open vial policy as, “A BCG vial should only be opened if there are seven or more children eligible and a measles vial should be opened even for one eligible child.”

D. Missed Opportunities in RI

i. Syringe stock-out

While observation showed that implementing the open vial policy is still a challenge for the timely delivery of vaccines, it was not the only gap that existed. The team observed that during two of the six outreach sessions, the HEWs ran out of syringes. One outreach session ran out of BCG syringes while the second outreach session ran out of syringes used for most other injections. The HEWs gave several reasons for the lack of syringes at the outreach sessions including gaps in the supply chain from the health care system and additional discrepancies with local partnering institutions involved with the vaccination session. This lack of syringes accounted for four infants not receiving the BCG vaccine and six other infants missing all of their vaccinations that month.

ii. Lack of adequate numbers of trained personnel

In addition, there are still gaps in availability of trained personnel. It was observed that a missed opportunity for RI was the lack of health professionals in attendance at outreach sessions to administer vaccines. At one HP, the outreach session was canceled due to a polio campaign with no additional personnel available to carry out the normally scheduled vaccination session. When asked about the missed outreach session, the HEW stated that the WHDAs had already been notified of the changed date.

A different circumstance occurred in which a HEW was new to the kebele and after arriving at the outreach site, she was informed by the mothers that there had not been a health professional present to administer vaccines for two months. After reviewing the registration book, documentation revealed these statements were accurate and it had been two months since the last date in the registration book. The missed opportunities at outreach sessions are resulting in delayed administration of vaccines. In the same kebele, at a different outreach session, it was revealed after a review of the registration book and discussions with mothers that HEWs had been absent for two months, but that HC personnel from the supervising PHCU were present to administer vaccines.

iii. Vaccinating during sickness

The HEWs reported that if a child has a fever and is severely sick, they will not be vaccinated. However further observations revealed that besides the reasons stated above all children were vaccinated at the outreach sessions—which is in line with the national immunization guidelines.
VIII. Recommendations

This case study identified many “promising practices” for RI in Ethiopia that should be highlighted. Each of these “promising practices” was shown to drive improvements in RI in Hintalo Wajerate woreda, and could be potentially used for scale up and scale out.

“Promising Practices to improve the delivery of RI services at HP level”

For regional health bureaus and woreda health offices to consider:

1. As indicated by FMOH guidelines, promote two trained health staff at each immunization session – one to vaccinate and the other to record (also for PHCUs to consider).
2. Where appropriate based on local cultural context, train religious leaders on health services provided by HEWs to gain support from the communities (also for PHCUs to consider).

For primary health care units to consider:

3. Schedule vaccination sessions on “easy to remember” holidays (as appropriate and based on local cultural context).
4. Establish a “master notebook” with careful transfer of documentation into the EPI register.
5. Work with kebele administration to appoint “community assistants” to support health staff with defaulter tracing during and after a vaccination session.
6. Create/use a defaulter notebook.
7. Establish “Tsebels” at sub-kebele level for the 1-5 networks and incorporate these meetings on the same day as vaccination sessions.
8. Report defaulting children to kebele administrations regularly to help HEWs assist in tracing them for the next session.
9. As part of reducing missed opportunities, work through community groups to encourage mothers about the importance of early arrival at immunization sessions so the HEW knows when she can open a multi-dose antigen.

Findings from this case study suggest that while HEWs are working to increase awareness about immunization, there remain gaps among community and religious leaders in understanding and supporting immunization services. In the context of this particular case study, rural communities were closely knit together by their religious leaders, and without the widely accepted support of immunization by religious communities, full mobilization could not have taken place. If communities see religious institutions supporting immunization, they will listen, and this could significantly reduce the number of left out and defaulter children. This support for full immunization coverage from all levels of government and religious sectors will create a united front in the fight against vaccine preventable diseases. While this case study focused on Hintalo Wajerate, the findings can be applied to many communities across Ethiopia—rooted in and building on the local cultural context.
It is also important for other WoHOs to be aware of Hintalo Wajerate’s “best practice” which was to train/educate all religious leaders and kebele administration on health topics, including immunization services. This best practice can be adopted in other woredas and scaled up at a national level. The training not only created awareness among the religious leaders and kebele administrations but also linked the HEWs more closely to those sectors establishing a more unified group in the fight against deadly diseases.

In addition to furthering the knowledge base of community religious leaders, findings also showed immunization registers were being under-utilized. The findings showed HEWs knew how to use a registration book after a child had come for his/her first round of vaccinations and how to locate defaulter children in the register. However, it is suggested that if HEWs could register pregnant women and newly born infants into the register as soon as possible (not just upon receiving first vaccination), this would significantly reduce left out children and ensure a more timely vaccination schedule, especially within Hintalo Wajerate woreda. The FMOH may want to explore benefits of immediate registration of newborns into the EPI register, rather than waiting for newborns to come to HPs for first vaccinations. This is also applicable for pregnant women. If this concept is reinforced from the federal level down, this could significantly reduce the number of left out and defaulter children and pregnant women.

IX. Conclusion

The practical techniques employed by Hintalo Wajerate woreda and the HEWs in this case study to strengthen routine immunization point to very specific and concrete actions that can be implemented at the managerial and frontline levels to reach all eligible women and children with life-saving vaccines. This includes the woreda’s approaches to educate community and religious leaders and to intentionally expand support for immunization services.

While the defaulter tracing strategies used by Hintalo Wajerate’s HEWs were simple, they were affordable and proved to be effective in their local context—leading to the potential for these strategies to be scaled up and used in other woredas to improve efforts to reduce defaulters and reach every child. Decision makers at all levels of the health system have the potential to help identify and promote low cost and practical solutions to immunize every eligible woman and child in Ethiopia. The findings from this case study can help in disseminating such solutions, for adaptation and uptake in other woredas across the country.
Appendix 1. RED-QI Briefer

Universal Immunization through Improving Family Health Services (UI-FHS) in Ethiopia: Quality Improvement in Reaching Every District (RED-QI)

UI-FHS is a 3.5 year learning initiative funded by the Bill & Melinda Gates Foundation and implemented by JSI Research and Training Institute, Inc. The goal of UI-FHS in Ethiopia is to develop evidence in three learning woredas (districts) to inform an Federal Ministry of Health (FMOH) evidence-based decision on whether and how to pursue nationwide universal child immunization, integrated with family health approaches, and what it will take to do so effectively, affordably and sustainably.

The emphasis of UI-FHS is on operationalizing Ethiopia's national routine immunization strategy, Reaching Every District/Community (RED/REC), by introducing strengthening elements of Quality Improvement (QI) and Plan-Do-Study-Act (PDSA) performance improvement cycles. The “RED-QI” approach is a process that supports addressing larger priority problems (e.g. persistently high drop-out rates) using small, rapid, doable changes that can quickly be tested and vetted for adoption, adaption or abandonment at local level. Although the focus of UI-FHS is on routine immunization strengthening, the RED-QI process is an approach which can be applied to all family health service interventions.

RED-QI gives program managers and implementers practical tools to help them continuously find and then vaccinate on time every eligible woman and child by:

- **Diagnosing** what the problems are using RED planning and supportive supervision tools and QI methodologies
- Finding **underlying causes** of system failures; **sharing** local solutions with peers
- Using a team approach to decide on **priority areas for change**
- Addressing priority areas by working on **smaller parts** of a larger problem that can be rapidly tested using local knowledge and expertise (e.g. 1-3 month PDSA “test cycles”)
- Determining if the changes being made are leading to **improvement**

RED-QI promotes a learning environment and provides woreda health officers and frontline health workers with user-friendly tools to identify and spread local solutions, and better understand root causes of problems impacting routine immunization in communities. Once the process is well established within a woreda, the approach can be spread to nearby woredas within a region, and then from region to region—with eventual vision of national scale up.

UI-FHS works with the FMOH, partners, and three learning woredas: Arbogona, Assaïta, and Hintalo Wajerat (in SNNP, Afar, and Tigray regions respectively). UI-FHS builds capacity of woreda health officers to provide long term and affordable technical and managerial support to their health workers, assists with operationalizing the RED/REC approach—with emphasis on activating stronger data analysis/use, supportive
supervision, and regular review meetings—and encourages Primary Health Care Units (PHCU, with a health center and its health posts) and woredas to actively seek out and regularly share successful local solutions with each other; see next page for graphic overview of the process.

**Using RED and QI tools to foster a learning culture, maximize current local knowledge, & rapidly test ideas at small scale at woreda & health facility levels:**

**RED/REC focus: supportive supervision**

Use supervisors as coaches to support QITs and supervision system as key method for helping to jointly identify aims.

**RED/REC focus on planning: annual microplanning & situation analysis**

Use fishbone analysis/other QI tools with RED microplanning to look at root causes of problems & identify 2-3 priority aims/objectives to address in the coming year (PLAN).

**RED/REC focus: improving community linkages & reaching the target populations**

Selecting 1 priority aim/objective jointly identified in WoHO, PHCUs involve community (e.g. HDAs) in Quality Improvement Teams (QITs; using existing groups if possible) to develop changes/activities and measures/indicators to address priority aim/objective; QITs meet regularly (DO; ACT).

**RED/REC focus: monitoring for action**

Use local data to help identify changes/activities and measures/indicators that relate to priority aim/objective; QITs use run charts and other data visualization tools to determine if changes/activities are working or not (STUDY); build on existing review meetings to hold regular learning sessions for QITs to share QI/PDSA progress/lessons/ideas with their peers within a woreda or region (STUDY).

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**Model for Improvement**

(three fundamental questions; PDSA cycles)

- **Aim:** What are we trying to accomplish?
- **Changes:** What changes can we make that will result in an improvement?
- **Measures:** How will we know that a change has led to an improvement?

**Act** to maintain gain or continue to improve

**Plan** the change

**Study** the results

**Do** the change

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**Quality comes not from inspection [of the outcome], but from improvement of the production process.** Source: Deming WE. Out of the Crisis (Cambridge, MA: MIT Press, 2000), p.29

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**The RED-QI methodology in action over the course of a year:**

- **WoHO PHCUs HDAs**
  - Annual Planning / Micro-planning
  - Use of local data & microplan follow up

- **PDSA cycles**
  - Measure, Learn, Revise: Quarterly Review Meeting
  - Measure, Learn, Revise: Quarterly Review Meeting

- **Repeat PDSA cycles with active use of data & microplan follow up; conduct four Quarterly Review Meetings per year**

**Supportive supervision/coaching as foundation of RED-QI,**

with regular analysis & use of local data; peer learning & capacity building.
Appendix 2. Consent form

Universal Immunization through Improving Family Health Services Project

Knowledge, Attitudes, and Practices – Formative Research

In-Depth Interview Consent Form for Key Informants

Letter of introduction and consent to participate in a research study as respondent

Dear Ms./Mr. (name of the participant) ______________________

You are cordially invited to participate in a study in which we are developing and testing a guide with recommendations on how to implement “best practices” on full immunization coverage in Ethiopia. If you decide to participate, an interviewer will ask you a series of questions about your involvement in “Defaulter Tracing and the Open Vial Policy” done in the woreda. For example, s/he may ask your implementation strategies on defaulter tracing and your thoughts on the open vial policy.

In addition to a questionnaire the interviewer and translator will follow you around two days prior to and one day following an immunization outreach session. He or she is just observing day to day tasks/activities and will not interfere with your work routine, however may ask a few questions for clarification especially as it relates to immunization activities.

Participation in this study is completely voluntary. You have the right to decline to participate and if you decide to participate, you have the right to leave the study at any time. The information you will provide during the interviews is strictly confidential, it will only be available to the project investigators, and will not be provided to anyone else.

If you decide to participate you will be collaborating with the UI-FHS project (JSI Research & Training Institute, Inc.) in its mission to investigate and find solutions to the barriers that prevent all children from having access to immunizations. If you have any questions, comments, or complaints about the study, you can contact (name of the study coordinator), study coordinator, by calling (telephone number).

Sincerely,
Shamara Wheldon
(JSI Research & Training Institute, Inc.)

........................................................................................................................................................................

I AGREE TO PARTICIPATE IN THIS STUDY YES (   ) NO (   )

NAME .......................................................... ..........................................................

VERBAL AGREEMENT ..........................................................

DATE .......................................................... ..........................................................

FIELD WORKER’S SIGNATURE .......................................................... ..........................................................
Letter of consent to participate in a research study as respondent

I, ________________________________ (name in full) have agreed to voluntarily participate in the survey, under the following terms and conditions:

1. I shall not be asked any question which would, in my opinion, be confidential or sensitive for the State or Government;
2. I shall not be asked any question that would in any way be sensitive for any of the religions practiced here;
3. I shall at all times reserve the rights of a respondent which have been read out and explained to me, as follows:
   a. I have the right not to answer one or more questions, and the right to withdraw from the survey at any point;
   b. No organization or individual concerned with the survey shall publish any of my personal data, or quote me, without my prior and express written consent;
   c. All opinions/answers shall be generalized and shall be used for research and related decision making purposes only;
   d. The researcher shall demonstrate the highest level of professionalism by ensuring that no incorrect or misleading interpretation of the collected data is done by the company or by any organization or individual associated with the study.

In witness where of, I have willfully put my signature on this the ___ day of ___ (month) of the year ___ AD.

_____________________
(Signature)
Date: __________________
Appendix 3: HEW Questionnaire

HEW Contribution to Routine Immunization

Name of Interviewer: _____________________

Name of kebele: __________________________

Koshets in Kebele (4):

Name of Health Post: ______________________

Position of Interviewee: HEW

What part of Ethiopia/Tigray are you from (Where she grew up) ________________________

Number of years at this HP ______

Number of years working as a HEW _____

Beginning and ending times of the interview: _________ / _________

Introduction

What are your main responsibilities at this health post?

What type of immunization services are provided by this HP?

Further Training (Education)

When you received your (diploma year educational training) tell us what your training consisted of as it relates to immunization services?

Is there continued education for you (HEW) on immunization services?

    How often do trainings on immunizations activities occur?

Defaulter Tracing Planning and Implementation

Can you explain how you do (work) defaulter tracing in this kebele (start from the beginning and walk us through to the end)?

So you walked us through one defaulter tracing plan; have you tried other ways to trace defaulters in your area?

What challenges do you face for tracing defaulter children?

If you are working at the regional Tigray health offices, what would you suggest to improve how HEWs do defaulter tracing throughout your area?

Who are the main people who help you with defaulter tracing and what roles do they play?

    If WHDA is mentioned, what role do they specifically play in tracking defaulter children?
    (How is the WHDA used in defaulter tracing?)
Community Mobilization (More Observation)

What are the strategies you have used to mobilize communities for immunization sessions? If response relates to ranking or competition ideas, probe about sustainability of this technique and how the ranking system can retain value.

Are there still challenges faced with convincing mothers to bring their children to an immunization site? Not all women bring their children to immunization sessions.

What are the challenges you face with immunization procedures especially working in such remote areas?

Do you have any suggestions to change the procedure?

Do the religious leaders help with immunization education or services? If yes, how have you utilized religious leaders or churches to help with immunization services? (What do the religious leaders do to help? How and when do they educate?)

Are there still religious leaders who do not approve of immunization services? Yes___  No____

If yes, why do they NOT approve?

Missed opportunities in routine immunization

When a child comes to the HP for a reason other than immunization, how do you know if he/she is up to date on all vaccines? N/A in this HP

(This relates to the national integrated maternal neonatal child health policy that says if a child comes to a HC/HP for any reason, a health worker should not just address that reason, but also address other issues such as does that child have all of his/her vaccines up to date.)

When a child comes to a routine immunization session, what are the most common reasons for a child NOT getting vaccinated?

• Explore these ideas if not mentioned: sick/fever, session cancelled, vaccine stock out, not enough children to open a BCG or measles vial (BCG is 20 dose vial and measles is 10 dose vial).

What are your thoughts on the open vial policy?

Explain to us how you decide to open a vial of BCG, measles (ex)?

If you have to tell a child to come back to another immunization session, EXPLAIN how you track if the child returns to the next session?
Appendix 4: WHDA inform discussion questions

WHDA Contribution to Routine Immunization

Name of Interviewer: ____________________________

Name of kebele: _______________________________

Position of Interviewee: mothers/care takers of the community (WHDA)

Beginning and ending times of the interview: _________ / _________

How often does the WHDA meet in your area? ___________

How often do the five leaders meet as a network? __________

Introduction

Tell me a little bit about how a WHDA begins (is established)? What role does the HEW play to help start a WHDA? After a WHDA is established what is the role of the HEW?

What motivates you women to stay involved in the WHDA?

Do the HEWs provide services for immunization as planned?

If the HEW is not available for an immunization date who comes to replace her?

Education

Has the WHDA had any training relating to immunization services?

If yes, from whom?

Does the WHDA ever discuss immunization activities at the regular meetings?

If yes, what is typically discussed?

Defaulter Tracing Planning and Implementation

Can you explain the role of the WHDA in helping to find children who missed their immunization date?

(Can you walk us through the steps of how you help find defaulter children?)

Does the HEW provide information/communicate to the WHDA in regards to children who have missed their immunization date? How is this done?

Community Mobilization

Does the WHDA help mobilize the community for immunization days? What strategies are used?

What activities do members of the WHDA contribute to on immunization days?

Are there challenges faced with convincing mothers to bring their children to an immunization site?
If yes, what has the WHDA done to try and convince mothers immunizations are important?

**Routine Immunizations**

When does the HEW provide vaccines for this area?

(Are all vaccines provided at every immunization date?)

What does the HP tell mothers if they must return for further immunizations for their children?

How do you know when an immunization session begins and which days?