Center for National Health Development in Ethiopia

# Ethiopia Health Extension Program

# Evaluation Study, 2007

## Volume -II

## Health Extension Workers performance survey

Amhara, Oromia, and SNNP Regions
2008

Center for National Health Development in Ethiopia

The Earth Institute AT COLUMBIA UNIVERSITY

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## HEWs' PERFORMANCE STUDY

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The Ethiopia Health Extension Program Evaluation Study, 2005-2007 (HEP Evaluation Study) is one of the monitoring and evaluation activities undertaken by the Center for National Health Development in Ethiopia (CNHDE) in support of the Ethiopian Ministry of Health. The evaluation study was funded by the Blaustein Foundation, the Earth Institute at Columbia University and the Gates Foundation.

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## *Abbreviations and acronyms*

| | |
|---|---|
| AIDS | Acquired immune deficiency syndrome |
| ANC | Antenatal Care |
| ARI | Acute Respiratory Infections |
| BP | Blood Pressure |
| BCG | Bacille Calmette Guerin |
| CBHWs | Community Based Health Workers |
| CBRHAs | Community Based Reproductive Health Agent |
| CEMOC | Comprehensive Emergency Obstetric Care |
| CHAs | Community Health Agents |
| CHP | Community Health Promoters |
| CHWs | Community health Workers |
| CNHDE | Center for National Health Development in Ethiopia |
| DHMO | District health management office |
| DHS | Demographic Health Survey |
| DPT | Diphtheria, Pertussis (whooping cough) and tetanus toxoids |
| FMOH | Federal Ministry of Health |
| FP | Family Planning |
| HC | Health Center |
| HEP | Health Extension Program |
| HEWs | Health Extension Workers |
| HIV | Human Immunodeficiency Virus |
| HP | Health Posts |
| HSDP | Health Sector Development Program |
| IM | Intramuscular Injection |
| IMCI | Integrated childhood Illness Management |
| MCH | Maternal and Child Health |
| MDGs | Millennium Development Goals |
| NGOs | Non Government Organizations |
| ORS | Oral Rehydration Salt |
| OPV | Oral Polio Vaccine |
| PHC | Primary Health Care |
| PPH | Post partum hemorrhage |
| RH | Reproductive Health |
| SNNP | Southern Nations Nationalities and Peoples |
| TB | Tuberculosis |
| TBAs | Trained/Traditional Birth Attendants |
| WHO | World Health Organization |

# *Preface*

The Center for National Health Development in Ethiopia (CNHDE), The Earth Institute at Columbia University, is pleased to present an Evaluation Survey Report of the Ethiopia Health Extension Program for 2005 – 2007. The principle objective of the evaluation survey is to generate critical information for policy-makers and program managers working in health. The CNHDE provides an independent evaluation of HEP to supplement the regular monitoring and evaluation activities undertaken by the Federal Ministry of Health (FMOH). This report summarizes the findings of the survey which was conducted in Amhara, Oromia and SNNP regions. The surveys were undertaken at the end of 2005 (baseline) and end of 2007 (follow-up). The evaluation report is prepared to inform the FMOH and Regional Health Bureaus (RHBs) on the implementation status in terms of achieving the goals and objectives of the HEP and identify challenges in the implementation of HEP. We also hope that it will be useful to stakeholders and partners to identify specific areas where they would support in the improvement of the program.

The evaluation report attempts to supplement the existing monitoring and evaluation programs of the FMOH and other surveys such as Demographic Health Survey (DHS) and Malaria Indicator Survey (MIS). Although, the routine health information system of the FMOH and RHBs provide critical information, it is not sufficient in providing wide ranges of data to show the impact of HEP. Household health surveys such as the DHS, although provide important information on demographic and health indicators for overall assessment of the health situation of the country, it doesn't provide the marginal effect of HEP on the health indicators. Moreover, the topics and indicators covered by DHS are not comprehensive enough to cover the 16 health service packages of HEP. Issues related to health facility performance and health provider, which are critical in addressing challenges and constraints in the implementation of HEP are also not covered by DHS and the existing health information systems.

In this report, we provide result of household survey, health provider (HEWs) survey, and health facility (health post) survey that cover all the 16 HEP service packages. We have provided a detailed result of the survey on all major areas of HEP and some recommendations intended to stimulate discussions and debate among all stakeholders for eventual improvement of the program are included.

The material within each result section is organized similarly. In most of the sections, a brief introduction of the topic and its importance in achieving the goals and objectives of HEP is given. The questions administered to household members or HEWs is indicated, and finally the response of respondents is presented. We have tried to organize the result sections by bringing similar topics together and as much as possible we tried to make the organization similar to other surveys such as DHS, where appropriate, to help users of the report cross reference with DHS.

The report is divided into three volumes, which enabled us to cover a wide range of program monitoring and evaluation areas. Volume **I** covers the results of the household survey. Chapter **1** of this Volume is concerned with introduction of the Ethiopian health system and particularly with description of HEP and rational of the HEP evaluation. Chapter **2** deals with the methodology of the HEP evaluation including the study design and sampling methods. A large part of the remainder of Volume **I** deal with the result of the household survey. Various areas under hygiene and environmental sanitation are contained in Chapter **3**. The results of maternal and child health survey is provided in Chapter **4**. The three major infectious diseases, malaria (Chapter **5**), HIV/AIDS and Tuberculosis (Chapter **6**) were also dealt with. Chapter **7** covers various topics that deal with community perception, utilization and satisfaction of HEP services. The last Chapter (Chapter **8**) deals with recommendations organized by major program areas.

Volume **II** covers HEWs performance. The first two Chapters deal with background and rational for HEWs performance survey (Chapter **1**) and study methodology (Chapter **2**) briefly covering specific areas with regard to HEWs, which are not covered in Volume **I** of the report. Chapter **3** provides perception and satisfaction of HEWs on various topics. The time allocation into the various components of HEP collected through diary method is given in Chapter **4**. Chapter **5** covers the assessment of the technical skills of HEWs. At the end of Chapters **3**-**5** are conclusions of the results of the survey and recommendations made.

Volume **III** covers health post performance. The first two chapters deal with brief description of the health posts and rational of the study (Chapter **1**) and study methodology (Chapter **2**), which are not covered in Volume **I** of the report. The remainder of Volume **III** report is organized into different areas of health facility performance such as infrastructure availability (Chapter **3**), HEP service availability and organization (Chapter **4**), readiness of health posts to provide HEP services (Chapter **5**), utilization of selected HEP services (Chapter **6**), quality of services (Chapter **7**), and referral system (Chapter **8**).

Survey on the management system of HEP at district level has been undertaken. The type of data collected is primarily qualitative in nature, and it is not ready for dissemination when this report is published due to time constraint. It will be reported soon as Volume **IV** of the HEP survey.

Lastly, we hope that the survey results facilitate the improvement of the problems highlighted in the survey. The data generated will contribute to the ongoing efforts of the FMOH, RHBs and other stakeholders of HEP including non-governmental organizations and international agencies in supporting and formulating effective measures to address challenges for the benefit of the health of rural communities.

## *Acknowledgement*

CNHDE is greatly indebted to the Blaustein Foundation, the Earth Institute at Columbia University and the Gates Foundation for providing funding to undertake the evaluation survey. CNHDE is grateful to the FMOH and RHBs for their logistic support and allowing us to undertake the study at the health posts and district health management offices.

Special thanks are due to all individuals and organizations who participated in the development of survey tools including questionnaires and survey personnel guidelines as well as translation of survey tools into local languages; who coordinated the field work during training of survey personnel and data collection; who developed database for the survey; who did the data processing and analysis; and who developed the report. Persons involved in survey design, organization, data analysis, and report preparation are listed at the end of the report.

Special thanks also to Cindy Paladines (Earth Institute, Columbia University) for her valuable comments and editions of the report.

CNHDE would like to lend special thanks to the survey field personnel for their tireless work to collect quality data and survey respondents who were important for the successful completion of the study.

# EXECUTIVE SUMMARY

Ethiopia launched a nation-wide Health Extension Program (HEP) to incorporate community based health interventions as a primary component of the national healthcare agenda. Although the emphasis on achieving comprehensive, equitable, and sustained coverage is critical, the ability to deliver a high quality of services is a similarly important goal in order to maximize the effectiveness of the program. There is a perceived risk that Health Extension Workers (HEWs) may not be equipped with the necessary skills and competence to properly implement 16 health service packages with one year of training. The multitasking of HEWs, as well as unbalanced allocation of time among the service packages may also lead to inefficiencies of HEP services in general, and particularly in service areas where less or no time was allocated. Moreover, HEWs' perception and satisfaction with their living and working environment, the performance management system, support from stakeholders, and continuing education they receive are important factors that may affect the quality of HEP services.

The **primary objective** of the study is to assess the HEWs' performance in the provision of the health service packages. The specific objectives under the primary objective were to determine HEWs' perception and satisfaction on living and working conditions, the execution of HEP, the support and continuing education, time use, and competence of HEWs. The assessment of the HEWs' competence was done in relation to the HEP standard. The study design and sampling methodology used in this study was linked with that of the household survey. Thus, the **secondary objective** of the study was to ultimately tie the findings of this study to that of the household survey (Part-I of the HEP evaluation report) in a meaningful way, and contribute information for the evaluation of the impact of HEP.

Questionnaires, which were administered by interviewers, were used to collect information on perception and satisfaction of HEWs, and competence of the HEWs. Moreover, a structured diary format was given to HEWs to record daily the way they allocate their time for 14 days. A total of 53 villages (20 from Amhara, 16 from Oromia, and 17 from SNNP) were included for this study, with 81 HEWs. To mitigate the influence of different geographic factors in the selection of health posts and HEWs, pooled estimates were constructed by using appropriate regional weights. The current report focuses on the **primary objective** of the study.

## PERCEPTION AND SATISFACTION OF HEWS

### Living and working conditions

**A third of the HEWs expressed satisfaction on the general condition of their housing.** About half of HEWs live inside the compound of the health post, and 82.9% of the HEWs live within one kilometer distance from the health post. Majority of HEWs had access to usable latrines and a source of safe water. Access to electricity is very low. Over half of the HEWs live within 10km distance to public transportation, telephone facility, and market place. Majority of HEWs own household equipments such as radio (79%), bed (72.8%), and table (55.6%). Few HEWs also own household animals.

**In general, majority (60.5%) of the HEWs expressed overall satisfaction with their monthly salary.** The monthly salary of HEWs ranged from Birr 530 to 760 with majority of HEWs receiving Birr 670 per month. Majority of HEWs collect their salary either from the district town (71.6%) or the nearest health center (21%). Only, 39.5% and 48.2% of HEWs feel that their monthly salary is commensurate with the workload and level of training they received, respectively. More HEWs in

SNNP feel that the salary is commensurate with their workload, while HEWs in Amhara feel that their salary is commensurate with their level of training. Majority of HEWs (mainly in Oromia) also feel that their salary level was lower compared to other government employees with similar educational background.

**The main means of transportation within the village and to the district health office for a majority of HEWs (67.9%) is by foot.** HEWs spent about 70 minutes walking to reach the furthest sub-village (got) from the health post. HEWs feel that the best means of transportation within the village and to the district health office would be motorcycle.

**Overall, less than half of HEWs feel that the physical working conditions such as their health post, housing and transportation are comfortable. Two-thirds of the HEWs feel that the village is a good place to work.**

**Execution of HEP activities**

**The performance management system is not adequately functional.** Only 56.8% of the HEWs have a work plan; the proportion of HEWs with a work plan is higher in SNNP (75%) than in Amhara (48.6%) and Oromia (53.9%). The involvement of other stakeholders in the preparation of work plans for HEWs is low. The majority of HEWs (75.3%) submit their progress report on a monthly basis, and two-thirds receive regular feedback about their progress reports from the DHMO. A majority of HEWs report that there was performance evaluation, which was helpful in improving their work performance. However, only a minority of HEWs feel that the performance evaluation impacted their promotions (35.8%), transfers (23.5%), disciplinary actions (19.8%), and vacancies and workload (19.8%).

**HEWs work for an average of 8.1hrs per day, and spend about 25% of the time at the health post.** HEWs work from 4 – 12hrs per day, with an overall average of 8.1hrs per day. Although, about half (53.1%) of HEWs reported that they have a standard manual on how to apportion their time among the 16 health packages of HEP, its availability was confirmed in 29.6% of HEWs. An average of 25% of HEWs' time was spent in the health post, with much variation within and among the regions.

**Time allocation pattern by HEWs was unbalanced, and mainly focused on a few HEP services.** Generally, HEWs spend most of their time on construction and maintenance of sanitary latrines, vaccination services, family planning, health education and communication. The main reason cited by HEWs include high demand and level of the problems, and HEWs feel that they have more skills and feel comfortable working in these areas. On the other hand, HEWs generally spend less time on the control of insects, rodents and other biting species, tuberculosis prevention and control, first aid, nutrition, maternal and child health, and adolescent reproductive health. The main reasons cited were due to low demand by the community, not a major problem in the village, and less skill and knowledge on these service packages.

**Majority of HEWs feel that the workload is too much, and requires more skill.** About 59.3% of HEWs rated the workload assigned to them as too much, but mainly in Amhara region. Moreover, 67.9% of HEWs claimed that the type of duties and responsibilities assigned to them require more training than the training they received.

**HEWs and Community based voluntary health workers (CHWs)**

**HEWs have more positive than negative perceptions on CHWs with regard to implementation of HEP.** A majority of villages have community based voluntary health workers. A majority of HEWs think that CHWs are important for the success of HEP, and attested that CHWs fully participate in the implementation of HEP. On the other hand, a majority of HEWs feel that community acceptance of CHWs is better

than that of HEWs', and over half of HEWs think that CHWs are threatened by the presence of HEWs in the village. A quarter of HEWs complained that the CHWs don't work under them, and have a poor working relationship. The negative perceptions were more evident in Oromia.

**Majority of HEWs have recruited new volunteers to serve the community as CHWs/promoters.** Each HEW formed an average of 13 volunteer CHWs/promoters, with the highest in Amhara (18 per HEW). The average number of currently active CHWs/promoters including the already existing CHWs was 15 per HEW.

**HEP and the community**

**Demand of the community is mainly on family planning, treatment of illnesses, and immunization.** About three-quarters of HEWs claimed that all or a majority of the community uses HEP services, while a quarter of HEWs reported otherwise.

**Although a majority of HEWs have initiated a model household package, the performance is low.** About 80% of HEWs have initiated model household packages, but each HEW has trained and graduated an average of only 43 model households, with variation within and between regions.

**Support and continuing education**

**About half of HEWs attended refresher courses in the one year preceding the survey.** The proportion of HEWs who received training was high in Amhara (85.7%) compared with Oromia (30.8%) and SNNP (35%). However, satisfaction about the refresher courses was low with only 45.7% expressing satisfaction. The preference of majority of HEWs on any one future refresher course was to be on delivery service, followed very remotely by other maternal and child health services.

**About two-thirds of HEWs were supervised at least once in three months, but quality was not adequate.** Only 60% of them were supervised regularly, and half were supervised monthly. The quality of supervision in terms of rate of supervision, regularity and frequency was better in Amhara than Oromia and SNNP regions. The method of supervision employed was, mainly, person-to-person discussions.

**On the whole, majority of HEWs reported that the supervision they received prior to the survey was supportive.** Majority also received guidance on technical aspects of services and feedback, although the feedback, in the greater part, was oral. About two-third of HEWs reported that more positive comments than negative were given during supervision. Generally, HEWs had a positive perception about their supervisors. **Taken as a whole, satisfaction of HEWs with supervision was high, and it was similar among the regions.**

**Relationship with relevant organizations**

**HEWs have good relations with the DHMO, the village cabinet, the community, health center staff, and agriculture workers.** About a quarter of HEWs are also members of their local committee or kebel cabinet. Majority of HEWs (66.7%) have a positive perception of the DHMO, feel that the DHMO supports an improvement of their skills, and communicates information. In about a third of the villages there were NGOs working on health. All HEWs in these villages participate in the activities of the NGOs, however about a third of them reported that their involvement strain their HEP work schedule. Moreover, only a third of HEWs reported to have good relationship with the NGOs.

**Challenges and constraints**

The major **technical challenges** in the implementation of HEP according to HEWs were irregular supply of vaccines, irregular/no supply of drugs, and lack of adequate skill. A majority of HEWs feel that between 20-50% of their professional inputs were not utilized because of these and other technical constraints. Poor roads

and poor communication systems were among the **social obstacles** identified by HEWs that need improvement. Moreover, lack of refresher courses on relevant areas such as delivery services, mobility problems, too many meetings, and lack of promotion were among the **organizational constraints** in the implementation of HEP. About 43.2% of HEWs feel that their efforts are not productive because of these constraints. Furthermore, uncomfortable working environments, mistaken information about HEWs, low acceptance by community, and lack of opportunity for upgrade and training were among the factors that affect **HEWs' motivation**.

The measures to address the constraints and to improve quality of services suggested by HEWs, in order of priority, were 1) solve stock-outs of drugs and other supplies; 2) refresher training; 3) work cooperatively with kebele cabinet and DHMO; and 4) provision of clean water, electricity, telephone and housing. In addition, HEWs suggested the following measures to improve their motivation, in order of priority: upgrading their skills through re-fresher course and increment of salary followed very remotely.

## HEWS TIME USE DIARY

**Majority of HEWs worked at least five days per week, and spent about a quarter of the time in the health post.** Three-quarters of HEWs worked at least 5 days a week. On average, each HEW worked a total of 90.4 hours over two weeks period. Overall, 24.6% of time was spent at the health post; 34.5% at the community level; 18.6% at household level; and 17.4% outside the village. HEWs in Amhara spent relatively more time at community and household level; HEWs in Oromia spent more time outside the village; while HEWs in SNNP spent more time within the village relative to the overall average.

### Time allocation to HEP services

**The highest time was allocated to support, supervision and continuing education, and the lowest to disease prevention and control.** The average allocation of time to the health programs was as follows: 16.4hrs on family health program, 15.4hrs on hygiene and environmental sanitation, 9hrs on disease prevention and control, 19hrs on support, supervision and continuing education, 14.4hrs on travelling within the village and district offices, and 11.6hrs on planning, reporting and communication. More time relative to the overall average was allocated, on planning, reporting and communication in Amhara; on hygiene and environmental sanitation, and disease prevention and control in SNNP; and on support, supervision and continuing education (mainly on meetings) in Oromia.

**There was a general trend to spend more time on specific HEP services and supporting activities.** Most time allocated to family health was spent on family planning, vaccination, and maternal and child health. HEWs spent less time on nutrition and adolescent reproductive health. Similarly, the bulk of time allocated to hygiene and environmental sanitation activities was spent on construction of sanitary latrines, waste management, and personal hygiene. First aid, malaria, and HIV/AIDS took the best part of time allocated to disease prevention and control program. HEWs spent less time on tuberculosis prevention and control. Attending kebele cabinet occupied the majority of time allocated to support, supervision and continuing education. Although, travelling from house to house consumed more, travelling to district to collect drug and salary and to submit reports was responsible for a good share of the time. Time allocated to planning, reporting, and communication was mainly spent on campaigns.

## HEWS COMPETENCE

### Maternal Health

**Only about 38.8% of HEWs had comprehensive knowledge on the uses of antenatal care.** However, knowledge on individual uses of

antenatal care was higher - to promote safe delivery (68.8%), preparation for birth and preventing disease (67.5%), ensure women has an individualized birth plan (56.3%), detection of existing diseases and management of complications (40%), and breast feeding promotion (23.8%).

**None of the HEWs had comprehensive knowledge on how to assess vaginal bleeding during pregnancy.** Some HEWs knew what signs to look for in a pregnant woman with vaginal bleeding such as signs of anaemia (35%), signs of shock (23.8%), abdominal tenderness (15%), and amount of external bleeding (15%), however, none were able to mention at least the four danger signs associated with vaginal bleeding during pregnancy. Moreover, about 8.8% of HEWs did not know what signs to look for. The knowledge on how to handle a pregnant woman with vaginal bleeding was generally good, and 75% of HEWs would refer the patient and 42.5% would check vital signs. However, the percent of HEWs who would do vaginal examination and speculum examination, and admit for observation and review was not negligible.

**One in five HEWs (21.3%) had comprehensive knowledge on the signs of severe anemia.** However, the knowledge on individual signs was higher, and 60% would look for marked pallor and 38.8% would look for shortness of breath. Half of the HEWs were in position to make the correct decision (refer the patient).

**Comprehensive knowledge on signs of severe malaria in pregnancy was very low.** The severe malaria specific responses of HEWs in order of frequency were to look for high temperature (62.5%), confusion/coma (22.5%), pallor (16.3%), and jaundice (11.25%).

**The proportion of HEWs with complete knowledge of establishing labor was 15.3%.** There was variation by region with 25%, 11.1% and 0% in Amhara, Oromia, and SNNP respectively. More than a quarter (26.3%) of HEWs has never attended a delivery, majority being from SNNP.

**Although comprehensive knowledge on monitoring labor was low, knowledge on specific measurements for monitoring labor was higher.** Majority knew monitoring foetal heart rate (62.7%), assessing cervical dilatation (59.3%), assessing descent of head (44.1%), and monitor maternal blood pressure (44.1%). Partograph was used for recording of observations by 27.1% of HEWs.

**Comprehensive knowledge on assessment of obstructed labour was low**, but some HEWs knew one or the other sigs including maternal distress (48.8%), no change in cervical dilatation (26.3%), no descent of presenting part (21.3%), and severe moulding (15.0%). However, about 16.3% of HEWs were not able to list any signs of obstructed labour. The actions most HEWs would take when encounter a woman with obstructed labour were refer (80%) and continuous bladder drainage by catheter (15%).

**The comprehensive knowledge on assessment of eclampsia was low and a quarter of HEWs didn't know any signs of eclampsia.** The knowledge on any sign of eclampsia was moderate, and about half knew oedema of feet, hands, and all face and high blood pressure, and about a quarter knew fits/convulsions, and proteinuria as the key signs.

**The comprehensive knowledge on assessing a mother with vaginal bleeding following delivery was very poor.** However, a significant number of HEWs knew one or the other signs. Among the commonly known signs were signs of shock, amount of external bleeding, un-contracted uterus, and retained products/placenta. About 11.3% of HEWs did not know what signs to look for. Majority of HEWs reported that they would refer the woman.

**The comprehensive knowledge on diagnosing complicated labour with infection was low (5%), and about one in five HEWs (18.8%) did not know**

**any signs**. However, the knowledge on any one or the other signs was moderate, and the commonly known signs were high fever (56.3%), foul smelling lochia (33.8%), high pulse (31.3%), and tender abdomen (31.3%).

**Newborn and child care**

**The comprehensive knowledge on immediate care to newborn was low**. However, majority of HEWs knew one or the other signs: ensure baby is breathing (67.8), cord care with sterile (61%), after birth of head, wipe face (57.6%), weigh the baby (50.9%), and initiate breast feeding within one hour (47.5%). **The comprehensive knowledge on diagnosing newborn with sepsis was also low**, and more than a quarter (28.8%) of the HEWs don't know any signs and symptoms of infection in the newborn. However, majority know that they need to refer the newborn.

**Knowledge of HEWs on IMCI is moderate**. Majority of HEWs were able to mention what to do with respect to checking the child for cough, diarrhea and fever, and for danger signs. Integrating vaccination services, nutritional counseling and growth monitoring were only considered by about a quarter of the HEWs. **The level of knowledge on danger signs was also moderate**. The proportions of HEWs that have identified fast breathing and lower chest in drawing, which are key indicative signs of severe pneumonia, were 59% and 49%, respectively.

**The level of knowledge in the management of children with diarrhea and knowledge on the signs and symptoms of uncomplicated malaria was satisfactory.** The signs and symptoms of malaria mentioned by majority of HEWs in order of frequency were headache (78.8%), chills/ shivering (76.3%), high temperature (66.3%), poor appetite (66.3%), sweating (63.8%), and vomiting (60%).

**Family planning and immunization**

**Knowledge on family planning and immunization schedule was high**. Majority of HEWs have adequate knowledge on family planning counseling information. About 93.8% of HEWs reported that they have provided vaccination services, majority of HEWs knew the correct recommended ages for the administration of BCG, Polio, DPT, and Measles. Generally, HEWs from Oromia has better knowledge on immunization schedule.

## CONCLUSION

In conclusion, based on the findings of the study: 1) Improving living and working conditions of HEWs such as housing, uniformity of salary, transportation, and access to basic facilities as well as defining a clear skill and career development incentives are critical for the success of HEP; 2) A functioning performance management system needs to be in place, and should be linked with promoting development; 3) There is a need to properly standardize the allocation of HEWs' time with emphasis on priority areas; 4) It is important to fully involve the CHWs, and ensure the formation of adequate number of promoters; 5) Supervision and refresher training programs need to be systematized to ensure that all HEWs have similar access to these support mechanisms. Improving quality of supervision and refresher trainings should be the focus; 6) Major constraints on technical, social, organizational, and motivation issues should be addressed. HEWs should be involved in decisions made to solve the challenges; and 7) Competency based training is necessary to provide evidence-based knowledge and skills, and training of HEWs around core competencies will yield a 'safe HEW' more quickly.

# BACKGROUND

In 2004, Ethiopia launched Health Extension Program (HEP) to expand the national health program to include community based health interventions as a primary component of the Health Sector Development Program (HSDP). It is based on Primary Health Care (PHC) approach. Re-orienting HSDP towards PHC approach would deliver better and high quality health care and improve the health of the people and ensure that the health system remains sustainable into the future. Moreover, majority of the health problems in Ethiopia are due to infectious and communicable diseases, which are better managed by an approach that focuses on preventive and promotive health services. International evidence suggests that health systems based on a strong PHC orientation are more efficient, have lower costs and more equitable health outcomes, and can achieve higher user satisfaction than those whose health systems have only a weak PHC orientation.

HEP is a nationwide comprehensive program targeting all rural populations and all health issues. HEP became operational with the recognition of the need for a massive scaling up of health post construction, the recruitment of health extension workers (HEWs). HEP services are organized along geographic lines (villages). The implementation of HEP involves construction of a comprehensive network of "primary health care units" with health posts in every rural village of 5000 people linked to referral health facilities.

Each health post is staffed and managed by two HEWs. One of the distinctive strategies in the implementation of HEP is the recruitment of female high school graduates from their respective villages, where possible, and nearby villages. Recruitment criteria includes females who completed at least 10th grade education, 18 years or older, and residents of the village. After recruitment, they receive one year intensive theoretical and practical training on 16 health service packages. The female Health Extension Workers become employee of the government with regular monthly salaries and other benefits. When the HEWs are deployed to their respective villages after receiving training they are accountable to the community through the Kebele council.

Although, the emphasis to achieving comprehensive, equitable, and sustained coverage is critical, quality of services is as important to maximize the effectiveness of the program. The impact of such a large number of new health professionals will be a challenge to the capacities of the already understaffed and under-budgeted health system. Although supervision and support is a key for success of a program, supervisors are often poorly resourced and lack supervision techniques, which may affect quality of services and job satisfaction. Although, salary level is an important determinant of morale and retention of health personnel in the field, supportive environment such as recognition of skills, performance based promotion, presence of functional infrastructure including referral systems and provision of accommodations are also important.

HEWs are expected to provide the primary health care properly as many aspects of primary health care are normally provided by sanitarians, educators, public health professionals, or lay persons with some health knowledge and training. However, quality of training is a determining factor in the performance and effectiveness of health programs. The training of 16 health packages in one year may not be adequate to provide quality services, which may lead to delivery of poor-quality services and low utilization by community. The multitasking (16 packages) by HEWs may also lead to inefficiencies of services. Hence there is a potential concern over the quality of care that the HEWs are providing the

community. There is a need to assess their technical capacity in dealing with the various HEP interventions.

Although there is no standardized time schedule developed by the ministry of health, the HEWs are expected to divide their time among all the components of the HEP. The time spent on each component may be affected by different factors including the level of the health problem in the community and demand of the service by the community, the HEWs' capacity and interest on the services and workload of the HEWs. There are major concerns that HEWs may spend more time on some components of the HEP and less or no time on other components of the program. Understanding the time use and workload of the HEWs will help in correcting the time allocation for each component, and will also provide a means for cost-effectiveness analysis of the various HEP service packages.

# STUDY METHODOLOGY

## 1.1 STUDY OBJECTIVES

The general objective of the HEWs' performance study was to monitor the HEP performance in the provision of the health service packages, and contribute information for the evaluation of the impact of HEP. Effective monitoring and evaluation project involves examination of whether the expected change(s) occurred at both the program level (outputs) and the population level (outcomes). The HEP impact evaluation requires data from household level to estimate the expected changes in the outcome measures (result of this study is compiled in Part-I of the HEP evaluation report). The purpose of the HEWs' performance study was to assess the program level (outputs) in relation to the HEP standard. Such monitoring entails collecting and analyzing information on various inputs and outputs of HEP services based on the standard of HEP. It will serve to track progress over time in terms of access to and quality of services, and provides valuable information for improving program management and administration.

**Specific Study Objectives:** 1) To assess the perception and satisfaction of HEWs in the living and working conditions, 2) To evaluate the performance and technical capacity of HEWs in the various HEP components, and 3) To estimate the time use of HEWs on HEP service packages. The outcomes measures were assessed at follow-up and some of the outcome measures measured are presented in table 2.1.

**Table 0.1: Selected outcome measures for the study objectives**

| Area | Outcome measures |
|---|---|
| **HEWs' perception and satisfaction** | Percent of HEWs satisfied with living and working conditions |
| | Percent of HEWs who have postive attitude towards CHWs |
| | Percent of HEWs who have trained volunteer promoters |
| | Percent of HEWs who initiated model household package service |
| | Percent of HEWs who received re-fresher course |
| | Percent of HEWs supervised |
| | Percent of HEWs who have good relationship with stakeholders |
| **Time use** | Percent of HEWs working per the standard number of days per week |
| | Percent of HEWs time spent at the health post |
| | Time allocation to HEP service packages |
| **HEWs knowledge and skills** | HEWs who correctly describe signs and management of obstetric and neonatal problems |
| | HEWs who can correctly state and describe the danger signs of sever febrile |
| | HEWs who can correctly state schedules for vaccination |
| | HEWS who can correctly state and describe signs and treatment for malaria |

## 1.2 STUDY DESIGN

The study design and sampling methodology used in this study aimed primarily to generate estimates of HEWs perception, satisfaction, and competence, and secondly to ultimately tie the characteristics of the sampled HEWs to those of the household survey documented in Part-I of the HEP evaluation report in a meaningful way. In order to be able accomplish both activities, the sampling methodology for the HEWs survey was linked to the household survey for the HEP evaluation. Thus, the design adopted the same sample villages used to generate household data collected for the intervention arm of the HEP evaluation study. The study design and sampling methodology for the evaluation of the HEP has been described in detail in Part-I of the HEP evaluation report. Some specifics to HEP performance survey are described here.

The linked sampling method employed in the study ensures the estimation of unbiased estimates of outcome (output) measures for HEWs in addition to providing additional information on the HEP environment for the community in the sample villages for the household survey. Thus, the linking of the HEP performance survey and health post performance survey to the household survey offers powerful analytic value for investigating how the performance of the HEWs and health posts can influence health practices and behaviors of the community.

## 1.3 SAMPLE SIZE

The method we employed had some constraints in the sample size for the HEP performance survey. The household survey for the HEP impact evaluation involved sample of 28 control villages and 42 intervention villages. The target for HEP performance study was the intervention villages. The number of health posts and HEWs included for the HEP performance study depended on the number of intervention villages sampled for the HEP impact evaluation because of the linked sampling design used. The intervention villages for the HEP impact evaluation were 42 villages, which was inadequate sample size to estimate the outcome measures. Thus, additional 11 villages that have implemented HEP were included to increase the sample of villages to 53.

The target for the evaluation of the performance and technical capacity of HEWs, and the estimation of time use of HEWs on the various HEP components were all the HEWs working in health posts within the selected intervention villages. Depending on the number of HEWs assigned in each of the 53 health posts (maximum of two), the expected number of HEWs would be from 53 – 106. However, a total of 81 HEWs were found and included for interview in this study.

As described in the study design for the HEP impact evaluation survey (Part-I), the complex sampling procedures employed resulted in exclusion of some of the regions, and in different probabilities of selection of sampling units from the three regions. As indicated in table 2.2, the number of health posts by region does not correspond with the population size of the regions, with 20, 16, and 17 health posts from Amhara, Oromia, and SNNP regions, respectively. Moreover, due to the different probabilities of health post selection and variation in the number of HEWs per health post, the difference in the probability of selecting HEWs became bigger by region. Majority of health posts in Amhara were staffed with two HEWs, while majority of health posts in SNNP were staffed with one HEW resulting in selection of higher proportion of HEWs from Amhara.

**Table 0.2: Distribution of sample health posts and HEWs by region**

| | Number of HPs and HEWs | | | |
|---|---|---|---|---|
| **Region** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Health posts (HP) | 20 | 16 | 17 | 53 |
| HEWs | 35 | 26 | 20 | 81 |
| Average number of HEWs/HP | 1.8 | 1.6 | 1.2 | 1.5 |

## 1.4 QUESTIONNAIRES

Questionnaires that only target the intervention villages were developed for data collection from HEWs during the follow-up study. These new questionnaires aimed at collecting information to investigate factors that may affect the effectiveness of HEP within the intervention villages. This information include factors such as the performance and capacity of the HEWs, and the time allocation for the various components of the HEP by the HEWs. Three questionnaires were used for data collection. For recording

of the time use of HEWs, a structured diary formats for daily recording of activities including the duration, and from where the activities were performed. The objective is to register their daily activities for 14 days, thus, each of the HEWs were given a bind copy of the diary registration forms enough for 14 days.

## 1.5 DATA COLLECTION

Data collectors: The same survey team involved in the household survey was involved in the HEP performance survey. The supervisors of the household survey administered the questionnaires to HEWs in each of the intervention villages. Supervisors were given additional training to undertake the data collection. Regional coordinators and CNHDE staff provided support to the supervisors. To achieve high quality data and homogeneity in the administration of the questionnaires, the training was standardized to include an exhaustive explanation on how to conduct the interview including the use of personalized introduction to HEWs, the use of the survey instruments, simulation of the interview by means of role-playing techniques, and practiced in health posts which were not part of the study.

Interview procedures: The study contents and survey purposes were explained to the HEWs, and oral informed consent was obtained from HEWs that agreed to participate in the study prior to undertaking data collection. HEWs' perception and satisfaction, HEWs' time use diary, and HEWs' competence surveys targeted each HEW and the questionnaires were administered for each of the HEWs separately. Data was collected from November 1 – December 30, 2007 at the same time with the follow-up survey of the HEP impact evaluation. Depending on the duration of HEP implementation in the sample villages, the interviews were conducted after one to two years of the implementation of the program started.

## 1.6 DATA PROCESSING AND ANALYSIS

Upon completion of the data collection and editing, data entry clerks having competency and experience were hired. Data managers at the CNHDE, with the support of the Earth Institute developed the data entry format and gave training to the data entry clerks. Data was cleaned and analyzed with STATA. Two data managers, a biostatistician and an epidemiologist were involved to undertake the statistical analysis. To mitigate the different probabilities of selection of health posts and HEWs due to the complex sampling procedures employed and the difference in the average HEWs per health post found in the sample health posts, the statistical analyses was undertaken using appropriate weights. The weighting strategy considered adjustments at the different stages of sampling to obtain a final set of survey weights, which match regional population size.

## 1.7 BACKGROUND CHARACTERISTICS OF SAMPLE VILLAGE AND HEWS

### 1.7.1 VILLAGE CHARACTERISTIC

A total of 53 villages that have implemented HEP were included for the study. These villages were from Amhara (20), Oromia (16) and SNNP (17) regions. Administratively, villages are organized to have an estimated population of 5,000 people. The average population per village was 3,946 people. However, there was very big variation among the villages. It varied from a minimum of 300 people in one of the villages in SNNP region to a maximum of 17,205 in one of the villages in Oromia region.

The average distance of the villages to the nearest health centre or district health office where HEWs report was 19.7Km. The average distance was similar among the regions, although it was slightly less in

SNNP (16.4). However, the range was very high - the furthest village being 56Km from the district health office, while the nearest village being 1Km from the district health office.

The overall average number of sub-villages per village was 5.6, and there was variation among the regions. The average number of sub-villages per village was 3.9, 7, and 6.7 in Amhara, Oromia and SNNP regions respectively. The average distance of the sub-villages from the health post was 7.6Kms, and the regional average was similar among all regions. However, the distance of the sub-villages to the health post varied from village to village with a minimum of 1Km and maximum of 30Kms.

**Table 0.3: Sample Kebele (village) characteristics by region**

| Characteristics | Amhara | Oromia | SNNP | Total |
|---|---|---|---|---|
| Population per kebele (mean) | 4257 | 3972 | 3370 | 3946 |
| Distance of kebele from DHO (Km) | 20.9 | 20.8 | 16.4 | 19.7 |
| Number sub-village per kebele (mean) | 3.9 | 7.0 | 6.7 | 5.6 |
| Distance of sub-villages from health posts (Km) | 7.9 | 8.2 | 6.1 | 7.6 |
| Total number of villages | 20 | 16 | 17 | 53 |

### 1.7.2 BACKGROUND CHARACTERISTICS OF SAMPLE HEWS

The total number of HEWs interviewed were 81 from Amhara (35), Oromia (26) and SNNP (20) regions. The average age of the HEWs was 22 years (minimum=19 and maximum 35 years). More than 80% of HEWs were Christian and about 15% were Muslim. Majority of HEWs (72.8%) were single, and about 24% were married (with children – 17.3% and without children – 7.4%). However, there was variation by region. In Oromia, 92.3% of HEWs were single, while 65.7% and 60% were single, in Amhara and SNNP respectively.

**Table 0.4: background characteristics of hews by region**

| | | Percent of HEWs | | | |
|---|---|---|---|---|---|
| **Background characteristics** | | **Amhara** | **Oromia** | **SNNP** | **Total** |
| **Age** | Average age (years) | 21.9 | 21.1 | 23.2 | 22.1 |
| **Religion** | Christianity | 85.7 | 76.9 | 80.0 | 81.5 |
| | Islam | 5.7 | 23.1 | 20.0 | 14.8 |
| | Other | 8.6 | 0.0 | 0.0 | 3.7 |
| **Marital status** | Married with children | 22.9 | 3.9 | 25.0 | 17.3 |
| | Married without child | 8.6 | 3.9 | 10.0 | 7.4 |
| | Single | 65.7 | 92.3 | 60.0 | 72.8 |
| | Widowed/Divorced/separated | 2.9 | 0.0 | 5.0 | 2.4 |
| **Original residence** | The same village | 34.3 | 26.9 | 35.0 | 32.1 |
| | Different village (same district) | 57.1 | 57.7 | 50.0 | 55.6 |
| | Other district (same zone) | 8.6 | 3.9 | 15.0 | 8.6 |
| | Other zone in the region | 0.0 | 7.7 | 0.0 | 2.5 |
| | Other | 0.0 | 3.9 | 0.0 | 1.2 |
| **Year training received** | 2004 | 14.3 | 0.0 | 15.0 | 9.9 |
| | 2005 | 71.4 | 23.1 | 30.0 | 45.7 |
| | 2006 | 11.4 | 42.3 | 40.0 | 28.4 |
| | 2007 | 2.9 | 34.6 | 15.0 | 16.1 |
| **Number** | | 35 | 26 | 20 | 81 |

Only one-third (32.1%) of HEWs were recruited from the same village where they were currently working. More than half (55.6%) of HEWs were recruited from another village but within the same district. About 8.6% of HEWs were recruited from different district within the same zone. There was not much difference by region. The year in which the sample HEWs received training varied by region. In Amhara, 71.4% received training in 2005; while in Oromia and SNNP majority (42.3% in Oromia and 40% in SNNP) received training in 2006.

HEWs were asked for the main reason they joined HEP. The responses of HEWs in order of frequency were to help the community (45.7%), job search (44.4%), attracted to work in my village (4.9%), attractive salary (2.5%), and relatively short training (1.2%). There was slight difference by region, and about 60% of HEWs from SNNP reported that they joined HEP to help the community, while it was only 37.1% and 46.2% from Amhara and Oromia, respectively.

**Table 0.5: Percent distribution of HEWs by main reasons they joined HEP**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Reason for joining HEP** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Job search | 45.7 | 46.2 | 40.0 | 44.4 |
| To help the community | 37.1 | 46.2 | 60.0 | 45.7 |
| Attractive to work in my village | 8.6 | 3.9 | 0.0 | 4.9 |
| Attractive salary | 5.7 | 0.0 | 0.0 | 2.5 |
| Other | 2.9 | 3.9 | 0.0 | 2.5 |
| Total number | 35 | 26 | 20 | 81 |

The length of total services HEWs provided corresponds with the year of training. More than 70% of HEWs served for a total of more than one year as HEWs. Similarly, about 54.4% of them served for more than one year in the same village where they were currently working. The percent distribution of HEWs by the total service as HEW and service within the village currently deployed is presented by region in table 2.6.

**Table 0.6: Percent distribution of HEWs' total service and service in the respective village**

| **Type of service** | **Duration** | **Percent of HEWs** | | | |
|---|---|---|---|---|---|
| | | **Amhara** | **Oromia** | **SNNP** | **Total** |
| **Total service as HEW** | Less or equal to 6 month | 5.7 | 3.9 | 5.0 | 4.9 |
| | > 6 month & < =12 month | 2.9 | 26.9 | 40.0 | 19.8 |
| | > 12 month & < 24 month | 28.6 | 26.9 | 20.0 | 25.9 |
| | 24 month + | 62.9 | 34.6 | 35.0 | 47.0 |
| **Service in this village** | Less or equal to 6 month | 2.9 | 7.7 | 10.0 | 6.2 |
| | > 6 month & < =12 month | 28.6 | 57.7 | 35.0 | 39.5 |
| | > 12 month & < 24 month | 22.9 | 23.1 | 25.0 | 23.5 |
| | 24 month + | 45.7 | 11.6 | 30.0 | 30.9 |
| Total number | | 35 | 26 | 20 | 81 |

# PERCEPTION AND SATISFACTION OF HEWS

## 1.8 LIVING AND WORKING CONDITIONS OF HEWS

### 1.8.1 HOUSING OF HEWS

Table 3.1 presents the characteristics of HEWs' housing. One-thirds of HEWs live in one of the rooms of the health post (which was similar in all regions), while another 13.6% live in a separate unit in the compound of the health post (mainly from Oromia and Amhara). Half of the HEWs live outside the health post compound. The houses for the HEWs were provided by the community (34.2%), HEWs' parent (24.4%), rent (22%), and HEWs' own house (19.5%). The distance of the houses where the HEWs live outside the compound of the health post varied from less than 10 meters to more than a kilometer. About 82.9% of the HEWs live within one kilometer distance from the health post.

**Table 0.1: Characteristics of HEWs' housing**

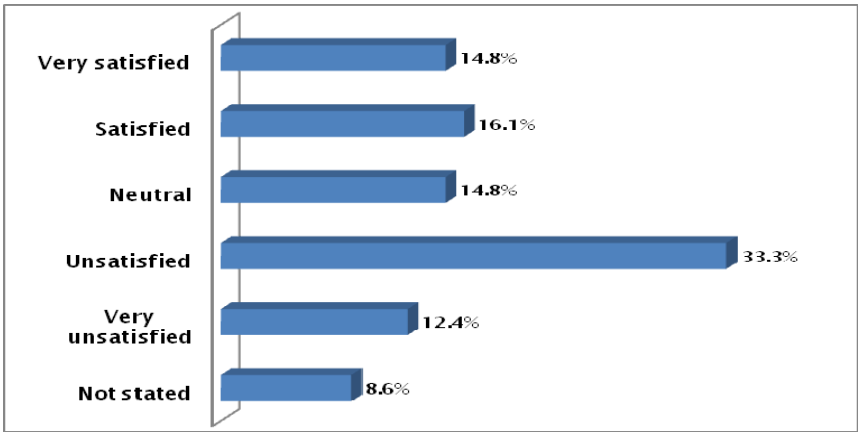
| | | Percent of HEWs | | | |
|---|---|---|---|---|---|
| **Factors** | **Characteristics** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| **Location of the house** | One room in the Health Post | 34.3 | 34.6 | 35.0 | 34.6 |
| | Inside the compound of HP | 11.4 | 26.9 | 0.0 | 13.6 |
| | Outside the compound | 51.4 | 38.5 | 65.0 | 50.6 |
| **House provided by** | Community | 50.0 | 40.0 | 7.7 | 34.2 |
| | My parents house | 11.1 | 20.0 | 46.2 | 24.4 |
| | Rent | 22.2 | 40.0 | 7.7 | 22.0 |
| | Own house | 16.7 | 0.0 | 38.5 | 19.5 |
| **House infrastructure** | Wall made of burnt bricks | 8.6 | 19.2 | 15.0 | 13.6 |
| **characteristics** | Roofed with iron sheets | 94.3 | 84.6 | 85.0 | 88.9 |
| | Cemented floor | 40.0 | 57.7 | 45.0 | 46.9 |
| | Access to usable latrine | 77.1 | 92.3 | 95.0 | 86.4 |
| | Access to electricity | 0.0 | 3.9 | 15.0 | 4.9 |
| **Distance to health post** | Less than 10 meters | 16.7 | 0.0 | 15.4 | 12.2 |
| | 10 -100 meters | 44.4 | 10.0 | 30.8 | 31.7 |
| | 100 – 1000 meters | 33.3 | 70.0 | 23.1 | 39.0 |
| | Greater than 1000 meters | 5.6 | 10.0 | 30.8 | 14.6 |
| **Distance to water source** | < 1 Km | 88.6 | 96.2 | 75.0 | 87.7 |
| **Distance to bus station** | <10 KM | 60.0 | 50.0 | 50.0 | 54.3 |
| | 11-30 Km | 25.7 | 30.8 | 45.0 | 32.0 |
| | > 30 Km | 14.3 | 15.4 | 5.0 | 12.4 |
| **Distance to telephone facilities** | <10 KM | 80.0 | 30.8 | 55.0 | 58.0 |
| | 11-30 Km | 20.0 | 61.5 | 40.0 | 38.3 |
| | > 30 Km | 0.0 | 3.9 | 5.0 | 2.5 |
| **Distance to market** | <10 KM | 68.6 | 26.9 | 65.0 | 54.3 |
| | 11-30 Km | 31.4 | 61.5 | 10.0 | 38.3 |
| | > 30 Km | 0.0 | 7.7 | 25.0 | 8.6 |
| **Total number** | | 35 | 26 | 20 | 81 |

The percentages for some variables do not add up to 100% due to missing data.

Few of the HEWs' houses (13.6%) were made of burnt bricks; 88.9% were roofed with iron sheets; 46.9% of the houses had cemented floor; 86.4% of the houses had access to usable latrine; and only 4.9% of the

houses had access to electricity. The majority (87.7%) of HEWs live within one kilometer distance to the nearest source of safe water. More than half of the HEWs live within 10 Km distance to public transport (bus) station (54.3%), telephone facilities (58%), and market place (54.3%). Only a third (30.9%) of the HEWs expressed satisfaction on the general condition of their housing.

**Figure 0.1: Percent distribution of HEWs by overall satisfaction about their housing (all regions)**




### 1.8.2 OWNERSHIP OF HOUSEHOLD EQUIPMENTS AND ANIMALS

Majority of HEWs own radio (79%), bed (72.8%), and table (55.6%), and about 14.8% of them own television. Some of the HEWs also own household animals such as cattle (19.8%), sheep/goat (14.8%), camel (13.6%) and horse/mule (13.6%). Few (2.5%) HEWs reported to have other sources of income.

**Table 0.2: Percent of HEWs who own household equipments and animals**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Equipments** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Radio | 82.9 | 73.1 | 80.0 | 79.0 |
| Bed | 82.9 | 50.0 | 85.0 | 72.8 |
| Table | 65.7 | 50.0 | 45.0 | 55.6 |
| Television | 22.9 | 11.5 | 5.0 | 14.8 |
| Land | 22.9 | 11.5 | 10.0 | 16.1 |
| Cattle | 22.9 | 15.4 | 20.0 | 19.8 |
| Sheep/goat | 20.0 | 15.4 | 5.0 | 14.8 |
| Camel | 20.0 | 11.5 | 5.0 | 13.6 |
| Horse/mule | 20.0 | 11.5 | 5.0 | 13.6 |
| Number of HEWs | 35 | 26 | 20 | 81 |

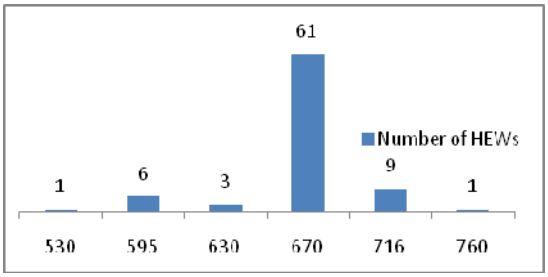
### 1.8.3 SALARY OF HEWS

Monthly salary: The monthly salary of HEWs ranged from Birr 530 to 760 with majority of HEWs receiving Birr 670 per month (Figure 3.2). The monthly salary varied by region (table 3.3). In Amhara it ranged from Birr 670 to 716; in Oromia it varied from Birr 595 to 760; and SNNP, it varied from Birr 530 to 716 per month. The variability in the monthly salary of HEWs was high in Oromia and SNNP regions compared to Amhara region. The overall mean monthly salary was Birr 667. There was slight variation of the mean monthly salaries of HEWs by region with the highest being in Amhara (Birr 678), while it was the same in Oromia and SNNP (Birr 660). The average monthly salary of HEWs slightly increased with the length of service as HEW.

**Table 0.3: Monthly salary of HEWs by length of service and region**

| Factors | | No. of HEWs | Monthly salary of HEWs | | |
|---|---|---|---|---|---|
| | | | Minimum | Maximum | Average |
| **Length of service** | Less than 1 year | 21 | 530 | 760 | 662 |
| | 1 year | 21 | 630 | 670 | 668 |
| | 2 years | 40 | 595 | 760 | 672 |
| **Region** | Amhara | 35 | 670 | 716 | 678 |
| | Oromia | 26 | 595 | 760 | 659 |
| | SNNP | 20 | 530 | 716 | 660 |
| **Total** | | **82** | **530** | **760** | **668** |

**Figure 0.2: Number of HEWs by monthly government salary**




Majority (71.6%) of HEWs collect their salary from the district town – either the district finance office (66.7%) or district health office (4.9%), and another 21% of HEWs collect their salary from the nearest health center. Only 7.4% of HEWs receive their salary at the health post.

**Table 0.4: Percent distribution of locations where HEWs collect their salary**

| Location for collecting salary | | Percent of HEWs | | | |
|---|---|---|---|---|---|
| | | Amhara | Oromia | SNNP | Total |
| District office | District finance office | 68.6 | 84.6 | 40.0 | 66.7 |
| | District health office | 2.9 | 7.7 | 5.0 | 4.9 |
| Health center | Nearest health centre | 14.3 | 7.7 | 50.0 | 21.0 |
| Village | Health post | 14.3 | 0.0 | 5.0 | 7.4 |
| Total number | | 35 | 26 | 20 | 81 |

*Perception on monthly salary relative to workload and level of training*: Overall, only 39.5% of HEWs feel that the monthly salary they receive was commensurate with the workload, with wide variation among the three regions. Two-third (65%) of HEWs in SNNP feels their salary was commensurate with the workload, while only 15.4% of HEWs in Oromia feel so. On the other hand, about half (48.2%) of HEWs feel that their salary was commensurate with the level of training they received. There was also variation among the regions with 65.7% of HEWs in Amhara and only a third of HEWs in Oromia and SNNP feeling that their salary was commensurate with the level of training.

**Table 0.5: Percent of HEWs who feel their salary is proportionate with workload and training**

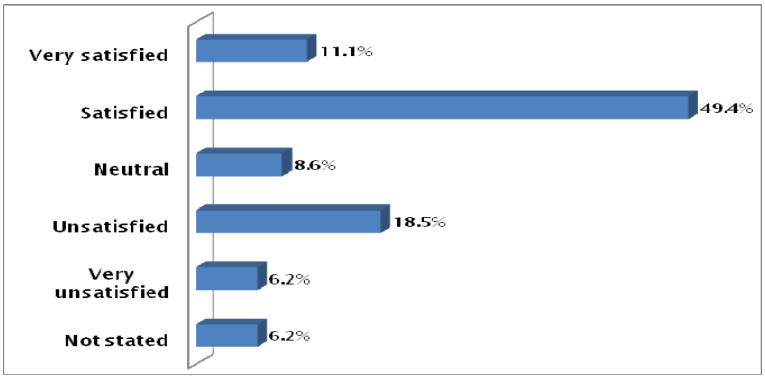
| Proportionate with | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Work load | 42.9 | 15.4 | 65.0 | 39.5 |
| Level of training | 65.7 | 34.6 | 35.0 | 48.2 |
| Number of HEWs | 35 | 26 | 20 | 81 |

*Perception on monthly salary relative to employees of other sectors*: Compared to other government employees with similar educational background working in other sectors, only a quarter (27.2%) of the HEWs feel that their salary level was higher, and another quarter (24.7%) of HEWs feel that their salary level was about the same. The remaining HEWs (45.7%) feel that their salary level was lower or very low compared to other government employees with similar educational background. There was variation among the regions (table 3.6). More HEWs in Oromia (73.1%) than the other regions feel their salary was lower compared to employee of other sectors. Majority (60.5%) of the HEWs expressed overall satisfaction on the amount of their monthly salary (Figure 2.3).

**Table 0.6: Percent distribution of HEWs by perception about amount of salary relative to employees of other sectors**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **HEWs feeling** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| My salary is higher | 37.1 | 19.2 | 20.0 | 27.2 |
| My salary is about the same | 40.0 | 3.9 | 25.0 | 24.7 |
| My salary is lower | 20.0 | 65.4 | 55.0 | 43.2 |
| My salary is very low | 0.0 | 7.7 | 0.0 | 2.5 |
| Don't know | 2.9 | 0.0 | 0.0 | 1.2 |
| Total number | 35 | 26 | 20 | 81 |

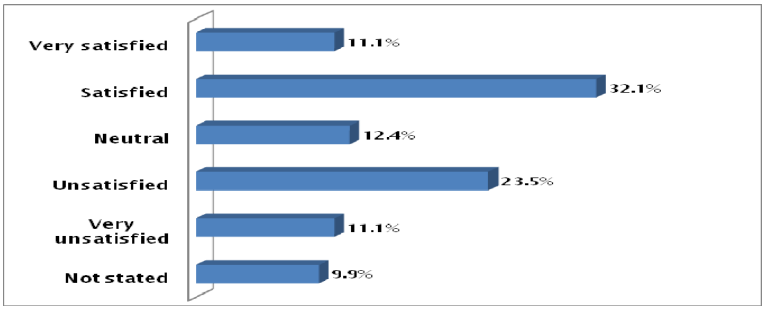
**Figure 0.3: Percent distribution of HEWs by overall satisfaction about their salary**




### 1.8.4 BENEFITS

Some HEWs reported that, apart from their governement salary, they have other benefits such as field allowance (21%), training (19.8%), transport (9.9%), hardship allowance (1 HEW), and housing benefits (1 HEW). Overall, 43.2% of HEWs reported that they were very satisfied or satisfied with other benefits they received.

**Figure 0.4: Percent distribution of HEWs by overall satisfaction about benefits**



### 1.8.5 MEANS OF TRANSPORTATION

The majority of HEWs (67.9%) travels by foot from the village to the district health office; while, about 22% of them use public transport such as bus to travel to the district health office. About 8.6% of HEWs use animal for transportation, which was mainly in Oromia region. The proportion of HEWs who use public transportation in Oromia region was also very small (3.9%), compared to 28.6% in Amhara and 35% in SNNP regions. Detailed information is presented in table 3.7.

**Table 0.7: Percent distribution of HEWs by usual means of transportation to travel to HC/DHMO**

| Usual means of transportation used by HEWs | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Walking | 71.4 | 69.2 | 60.0 | 67.9 |
| Bus/public transport | 28.6 | 3.9 | 35.0 | 22.2 |
| Animal | 0.0 | 26.9 | 0.0 | 8.6 |
| Others | 0.0 | 0.0 | 5.0 | 1.2 |
| Total number | 35 | 26 | 20 | 81 |

HEWs were asked for their opinion on what would be the best means of transportation to travel to and from the district health office and health center. The responses of HEWs in order of frequency were motorcycle (34.6%), vehicle (21%), animal (13.6%), bus (13.6%), bicycle (6.2%), and walking (4.9%). The other responses are also shown in table 3.8. There was much variation by region. The two most frequently suggested means of transportation were vehicle (28.6%) and bus (20%) in Amhara; motorcycle (50%) and animal (19.2%) in Oromia; and motorcycle (70%) and vehicle (15%) in SNNP region.

**Table 0.8: Percent distribution of HEWs by their opinion on best means of transportations to travel to DHMO**

| Best means of transportation suggested by HEWs | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Motorcycle | 2.9 | 50.0 | 70.0 | 34.6 |
| Car | 28.6 | 15.4 | 15.0 | 21.0 |
| Animal | 17.1 | 19.2 | 0.0 | 13.6 |
| Bus | 20.0 | 7.7 | 10.0 | 13.6 |
| Bicycle | 11.4 | 3.9 | 0.0 | 6.2 |
| Walking | 8.6 | 3.9 | 0.0 | 4.9 |
| Other | 11.4 | 0.0 | 5.0 | 6.2 |
| Total number | 35 | 26 | 20 | 81 |

The usual mode of transportation that HEWs use in their work within the village was walking. The average estimated time HEWs spent to reach the furthest sub-village (got) from the health post using the usual mode of transportation (which is walking) was 70 minutes (range of 9 min to 240 minutes). Relatively HEWs in Oromia spent more time walking to reach the furthest got from their health post.

HEWs were asked for their opinion on what would be the best means of transportation to travel within the villages. The responses of HEWs in order of frequency were motorcycle (30.9%), animal (22.2%), bicycle (16.1%), and walking (13.6%). There was much variation by region (table 3.9). In SNNP, the preferred mode of transportation was motorcycle (70%); in Amhara, the preferred mode of transportation was animal (40%); and in Oromia, it was animal (15.4%). In Oromia, about 53.9% of HEWs did not respond to the question.

**Table 0.9: Percent distribution of HEWs by their opinion on best means of transportation within the village**

| Best means of transportation suggested by HEWs | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Motorcycle | 22.9 | 11.5 | 70.0 | 30.9 |
| Animal | 40.0 | 15.4 | 0.0 | 22.2 |
| Bicycle | 17.1 | 7.7 | 25.0 | 16.1 |
| Walking | 20.0 | 11.5 | 5.0 | 13.6 |
| Not stated | 0.0 | 53.9 | 0.0 | 17.3 |
| Number of HEWs | 35 | 26 | 20 | 81 |

### 1.8.6 PHYSICAL WORKING CONDITIONS IN THE VILLAGE

Only less than half of the HEWs feel that the physical working conditions such as the health post, housing and transportation are comfortable. The proportion of HEWs who feel comfortable with the physical working conditions was higher in SNNP (60%) and Amhara (54%) than in Oromia (26.9%). Two-third of the HEWs feels that the village is a good place to work. Majority of HEWs in SNNP feel that the village is a good place to work.

**Table 0.10: Percent of HEWs who feel comfortable with physical working conditions and the village**

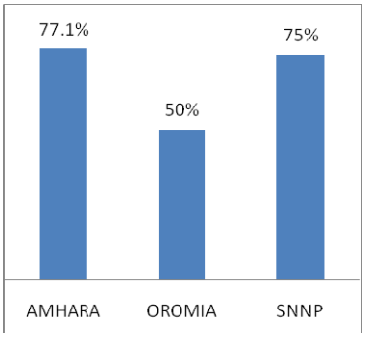
| Factors | % of HEWs who feel comfortable | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Physical working conditions | 54.3 | 26.9 | 60.0 | 46.9 |
| Village | 48.6 | 61.5 | 95.0 | 64.2 |
| Number of HEWs | 35 | 26 | 20 | 81 |

## 1.9 EXECUTION OF HEP ACTIVITIES

### 1.9.1 ORIENTATION DURING DEPLOYMENT

Overall, two-thirds (67.9%) of HEWs were served with job description during their deployment to their villages to start working as HEWs. There was huge variation on this aspect among the regions. Half of the HEWs in Oromia region reported that they were not served with job description, while it was about a quarter of them in Amhara and SNNP regions.

**Figure 0.5: Percent of HEWs served with job description by region**




The HEWs who reported that they were served with job description were asked to list the duties and responsibilities that were included in the job description. Each of the HEP service packages were listed by about half of HEWs, while registration of vital statistics and planning and reporting were listed by about a third of HEWs (Table 3.11).

**Table 0.11: Percent of HEWs served job description with responsibilities and functions**

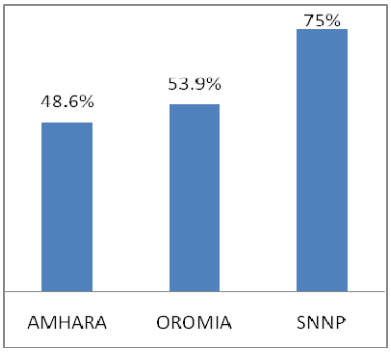
| Responsibilities included in job description | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Construction & maintenance of sanitary latrines | 71.4 | 42.3 | 70 | 61.7 |
| Personal hygiene | 65.7 | 50.0 | 70 | 61.7 |
| Solid and liquid waste management | 71.4 | 46.2 | 60 | 60.5 |
| Water supply safety measures | 71.4 | 50.0 | 55 | 60.5 |
| Food hygiene (food safety measures) | 71.4 | 34.6 | 65 | 58.0 |
| Building and maintaining healthful house | 68.6 | 42.3 | 50 | 55.6 |
| Control of insects, rodents and biting species | 62.9 | 34.6 | 45 | 49.4 |
| Tb prevention & control | 74.3 | 42.3 | 75 | 64.2 |
| Malaria prevention & control | 62.9 | 42.3 | 75 | 59.3 |
| HIV/AIDs prevention & control | 60.0 | 46.2 | 60 | 55.6 |
| First aid | 60.0 | 38.5 | 50 | 50.6 |
| Family planning | 65.7 | 50.0 | 65 | 60.5 |
| Maternal and child health. . | 65.7 | 46.2 | 55 | 56.8 |
| Vaccination services | 60.0 | 42.3 | 55 | 53.1 |
| Nutrition | 62.9 | 30.8 | 50 | 49.4 |
| Adolescent repro. Health | 54.3 | 30.8 | 50 | 45.7 |
| Health education and communication | 57.1 | 50.0 | 50 | 53.1 |
| Registration of vital statistics | 48.6 | 34.6 | 30 | 39.5 |
| Planning and reporting | 51.4 | 34.6 | 25.0 | 39.5 |

### 1.9.2 PERFORMANCE MANAGEMENT SYSTEM

***Work plan***

Overall, only 56.8% of the HEWs reported that they have work plan developed for their activities. Higher proportion of HEWs in SNNP (75%) reported having work plan than HEWs in Amhara (48.6%) and Oromia (53.9%).

**Figure 0.6: Percent of HEWs who have work plan for their activities**




The participation rate of the different actors in the health system in the preparation of the work plans of HEWs was assessed. The actors who were involved in order of participation were HEWs (54.4%), kebele health committee (34.8%), Kebele officials (19.6%), community (17.4%), district health office (8.7%), and NGOs. The overall participation of other actors (other than the HEWs themselves) was generally low; and, there was variation among the regions. In Amhara and SNNP regions, the participation of kebele level stakeholders was better than district health office. On the other hand, the involvement of district health office was 28.6% in Oromia compared to 0% in both Amhara and SNNP regions. Generally, there was relatively better involvement of Kebele level actors in SNNP and district level actors in Oromia.

**Table 0.12: Percent of HEWs with stakeholders participating in the preparation of their work plan**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Stakeholders** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| HEWS | 58.8 | 71.4 | 33.3 | 54.4 |
| Kebele health committee | 52.9 | 7.1 | 40.0 | 34.8 |
| Kebele officials | 29.4 | 14.3 | 13.3 | 19.6 |
| Community | 11.8 | 21.4 | 20.0 | 17.4 |
| District health office | 0.0 | 28.6 | 0.0 | 8.7 |
| Other | 5.9 | 0.0 | 13.3 | 6.5 |
| NGOs | 0.0 | 0.0 | 0.0 | 0.0 |
| Number of HEWs | 17 | 14 | 15 | 46 |

***Performance evaluation***

Majority (90.1%) of HEWs reported that there was performance evaluation, and 80.3% of HEWs feel that the performance evaluation was useful in helping improve their work performance. Some HEWs feel that the DHMO/supervisors impact their performance. The performance factors listed by HEWs in order of frequency were promotions (35.8%), transfers (23.5%), disciplinary actions (19.8%), and vacancies and workload (19.8%). Other factors listed by HEWs are presented in the table below.

**Table 0.13: Percent of HEWs who feel that DHMO impact their performance by region**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Performance factors** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Promotions | 22.9 | 46.2 | 45.0 | 35.8 |
| Transfers | 37.1 | 11.5 | 15.0 | 23.5 |
| Disciplinary actions | 22.9 | 15.4 | 20.0 | 19.8 |
| Vacancies and work load | 31.4 | 7.7 | 15.0 | 19.8 |
| In-service training | 25.7 | 7.7 | 0.0 | 13.6 |
| Annual confidential reports | 5.7 | 23.1 | 10.0 | 12.4 |
| Pay and bonuses | 11.4 | 3.9 | 20.0 | 11.1 |
| Merit-based awards | 2.9 | 7.7 | 5.0 | 4.9 |
| Tenure | 0.0 | 7.7 | 5.0 | 3.7 |
| Total number | 35 | 26 | 20 | 81 |

***Progress report and feedback***

Three-fourth (75.3%) of HEWs submits their progress report on monthly basis, while 11.1% of HEWs submit on weekly basis. Some HEWs (8.6%) reported that they submit their progress report as need arises, and most of these HEWs are from Oromia region. Two-thirds of HEWs reported that they receive regular feedback about their progress reports from the DHMO.

**Table 0.14: Percent distribution of HEWs by frequency progress report submission to DHMO**

| **Frequency of reporting** | **Percent of HEWs** | | | |
|---|---|---|---|---|
| | **Amhara** | **Oromia** | **SNNP** | **Total** |
| As need arises | 2.9 | 23.1 | 0.0 | 8.6 |
| Weekly | 11.4 | 3.9 | 20.0 | 11.1 |
| Bi-weekly | 5.7 | 0.0 | 5.0 | 3.7 |
| Monthly | 80.0 | 73.1 | 70.0 | 75.3 |
| Not stated | 0.0 | 0.0 | 5.0 | 1.2 |
| Total number | 35 | 26 | 20 | 81 |

***Promotion***

About two-third of HEWs said that the human resources/personnel policies (such as transfer, promotion, upgrading, annual leave, maternal leave , etc) are clearly defined in the health system, and 74.1% feel that the job promotions in the health system are fair and objective. Majority (88.9%) of HEWs also expressed satisfaction with their future prospects for promotion.

**Table 0.15: HEWs' perception on human resource policies and promotions**

| Human resource policies | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Clearly defined human resource policies | 65.7 | 76.9 | 65.0 | 69.1 |
| Job promotions are fair and objective | 80.0 | 69.2 | 70.0 | 74.1 |
| Satisfied with prospective for promotion | 85.7 | 96.2 | 85.0 | 88.9 |
| Number of HEWs | 35 | 26 | 20 | 81 |

### 1.9.3 REPORTED WORKING HOURS AND ALLOCATION OF TIME

*a) Reported working hours per day*: The number of hours HEWs work daily varied from a minimum of 4 hours to a maximum of 12 hours per day, however, most of the HEWs (81.5%) worked at least 8 hours per day with an overall average of 8.1 hours per day. There was slight difference between the regions with HEWs in Amhara region working longer (8.5 hours) hours than HEWs in Oromia and SNNP.

**Table 0.16: Percent distribution of HEWs by the reported working hours per day**

| Working hour per day | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| <8 hours | 14.3 | 15.5 | 30.0 | 18.5 |
| 8 hours | 45.7 | 73.1 | 40.0 | 53.1 |
| >9 hours | 40 | 11.6 | 30 | 28.3 |
| Median | 8 | 8 | 8 | 8 |
| Mean | 8.5 | 7.8 | 7.8 | 8.1 |

*b) Manual on time allocation*: About half (53.1%) of HEWs reported that they have a standard manual on how to apportion their time among the 16 health packages of HEP. Among these, the availability of the standard manual was confirmed by the interviewer in half of them (29.6%). Relatively higher proportion of the standard manual was confirmed in Amhara (34.3%) than in Oromia (26.9%) and SNNP (25%).

**Table 0.17: Percent distribution of HEWs by availability of standard manual on time allocation**

| Standard manual | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Available and confirmed | 34.3 | 26.9 | 25.0 | 29.6 |
| Available but not confirmed | 20.0 | 23.1 | 30.0 | 23.5 |
| Not available | 40.0 | 46.2 | 45.0 | 43.2 |
| Number of HEWs | 35 | 26 | 20 | 81 |

*c) Time spent at health post*: The percentage of time HEWs spent in the health post varied from a minimum of 0% to 80%, however, most of the HEWs spent between 20% - 25% of their time in the health post with an average of 25%. About 14.8% of HEWs spent less than 20% of their time at the health post, 59.3% of HEWs spent between 20-29% of their time at the health post, while 22.2% of HEWs spent more than 30% of their time at the health post.

**Table 0.18: Number of HEWs by percentage of time spent at the health post by region**

| Percent (%) of time spent at HP | Number of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| **0 - 5** | 5.7 | 11.5 | 5 | 7.4 |
| **10 - 19** | 11.4 | 0.0 | 10 | 7.4 |
| **20 - 29** | 54.3 | 61.5 | 65 | 59.3 |
| **30 - 49** | 5.7 | 11.5 | 10 | 8.6 |
| **50 +** | 14.3 | 15.4 | 10 | 13.6 |
| **Not stated** | 8.6 | 0 | 0 | 3.7 |
| **Median** | 25% | 25% | 25% | 25% |
| **Mean** | 25.7% | 26.8% | 26% | 26.1% |
| **Total number** | 35 | 26 | 20 | 81 |

d) *Reported time spending behavior on HEP services*: HEWs were asked to list the top and bottom 5 HEP services based on the time they spent. The top 5 HEP services that HEWs generally spend more time, in order of frequency, were construction and maintenance of sanitary latrine (80.3%), vaccination services (61.5%), family planning (60.5%), health education and communication (37%), and maternal and child health (35.8%). The main reasons cited by the majority of HEWs for all the top 5 services were similar. Major problem in the village and due to high demand on the service were the two commonly cited reasons for spending more time on these services. Other reasons include HEWs were comfortable to work on the service and have more skills and knowledge on the service. The detailed information for each service and reason is presented in table 3.19.

The bottom 5 HEP services that HEWs generally spend less or no time in order of frequency were control of insects, rodents and other biting species (50.6%), tuberculosis prevention and control (50%), first aid (49.4%), nutrition (49.4%), and adolescent reproductive health (37.4%). The main reasons cited by majority of HEWs were similar for all the services. Low demand by the community, not a major problem in the village, and less skills and knowledge on the service were the most frequently cited reasons for spending less or no time on the services (table 3.20).

**Table 0.19: Top 5 HEP health service packages that HEWs generally spend more time by reasons**

| The Top 5 components | HEWs that identified service area (%) | % distribution of HEWs by reasons for spending more time on HEP service | | | | | |
|---|---|---|---|---|---|---|---|
| | | Major problem in the village | Due to high demand on service | More skills & knowledge on service | Comfortable with service | Like to work on service | consume more time |
| Construction of sanitary latrines | 80.3 | 67.7 | 24.6 | 3.1 | 4.6 | 0 | 0 |
| Vaccination services | 61.5 | 40 | 38 | 12 | 0 | 6 | 4 |
| Family planning | 60.5 | 53.1 | 22.5 | 8.2 | 14.3 | 0 | 2 |
| Health education and communication | 37 | 40 | 26.7 | 10 | 6.7 | 13.3 | 3.3 |
| Maternal and child health | 35.8 | 41.4 | 27.6 | 6.9 | 10.3 | 10.3 | 3.4 |

**Table 0.20: Bottom 5 HEP health service packages that HEWs generally spend less time by reasons**

| Bottom 5 components | HEWs that identified service area (%) | % distribution of HEWs by reasons for spending less time on HEP service | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Low demand on service | Not a major problem in the village | Less skills & knowledge on service | No enough time (Workload) | Consume less time | Not comfortable with service | Don't enjoy working on it |
| Control of insects, rodents and other biting species | 50.6 | 28.3 | 28.3 | 15.2 | 8.7 | 6.5 | 2.2 | 0 |
| TB prevention and control | 50.0 | 29.3 | 34.2 | 14.6 | 7.3 | 9.7 | 4.9 | 0 |
| First aid | 49.4 | 32.5 | 20 | 15 | 10 | 12.5 | 7.5 | 2.5 |
| Nutrition | 49.4 | 22.5 | 27.5 | 17.5 | 17.5 | 10 | 5 | 0 |
| Adolescent reproductive health | 37.4 | 41.9 | 16.1 | 16.1 | 9.7 | 6.5 | 0 | 6.5 |

### 1.9.4 HEALTH SERVICE PACKAGES AND OTHER ACTIVITIES IMPLEMENTED BY HEWS

***HEP service packages***

Although, all HEWs are expected to render services on all the HEP service packages, none of the HEWs practiced all of the HEP service packages (table 3.21). Among the health service packages under the hygiene and environmental sanitation program, construction and maintenance of sanitary latrines, personal hygiene, and solid and liquid waste management were practiced by 84%, 81.5%, and 74.1% of HEWs respectively. The other service packages under this program were practiced by about two-thirds of HEWs.

Under the disease prevention and control program, HIV/AIDs prevention was practiced by three-fourth (76.5%) of HEWs; disease outbreak investigation and control was practiced by 63% of HEWs; while malaria prevention and control and first aid were practiced by only half of the HEWs. Regarding malaria prevention and control, it is expected that some of the HEWs would not practice it because some villages could be non-malarious.

HEP service packages under family health service program, which were practiced by about three-fourth of HEWs include family planning (79%), vaccination services (77.8%) and maternal and child health (76.5%). On the other hand, only 45.7% and 37% of HEWs provided nutrition and adolescent reproductive health services respectively. Health education and communication was reported to be rendered by 82.7% of HEWs.

**Table 0.21: Percent of HEWs practicing the various HEP service packages**

| HEP service packages | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| **Hygiene and environmental sanitation** | | | | |
| Construction and maintenance of sanitary latrines | 85.7 | 84.6 | 80.0 | 84.0 |
| Personal hygiene | 77.1 | 88.5 | 80.0 | 81.5 |
| Solid and liquid waste management | 80.0 | 69.2 | 70.0 | 74.1 |
| Water supply safety measures | 71.4 | 61.5 | 65.0 | 66.7 |
| Food hygiene (food safety measures) | 60.0 | 53.9 | 75.0 | 61.7 |
| Building and maintaining healthful house | 71.4 | 46.2 | 60.0 | 60.5 |
| Control of insects, rodents and other biting species | 62.9 | 53.9 | 60.0 | 59.3 |
| **Disease prevention and control** | | | | |
| HIV/AIDs prevention and control | 68.6 | 84.6 | 80.0 | 76.5 |
| Disease outbreak investigation and control | 71.4 | 46.2 | 70.0 | 63.0 |
| Malaria prevention and control | 62.9 | 34.6 | 75.0 | 56.8 |
| Tuberculosis prevention and control | 45.7 | 53.9 | 75.0 | 53.6 |
| First aid | 54.3 | 53.9 | 45.0 | 51.9 |
| **Family health service** | | | | |
| Family planning | 80.0 | 73.1 | 85.0 | 79.0 |
| Vaccination services | 80.0 | 73.1 | 80.0 | 77.8 |
| Maternal and child health | 85.7 | 73.1 | 65.0 | 76.5 |
| Nutrition | 54.3 | 30.8 | 50.0 | 45.7 |
| Adolescent reproductive health | 40.0 | 26.9 | 45.0 | 37.0 |
| **Total HEWs** | 35 | 26 | 20 | 81 |

***Other HEP supporting activities***

In addition to the main HEP service packages, HEWs are involved in a number of supporting and cross-cutting activities (table 3.22). Majority of HEWs reported that they prepare their plan and progress reports (91.4%) and undertake campaigns (88.9%). On the other hand, about 74.1% of HEWs register vital statistics.

HEWs were also involved in various meetings including Kebele cabinet meeting (83.9%), review meeting with NGOs and other stakeholders (80.3%), and meeting with CHWs (74.1%). About two-third of HEWs were also involved in refresher training and supervising CHWs. Only 40% of HEWs were involved in review meetings at DHMO. Majority of HEWs were also engaged in travelling to District Offices to submit reports (91.4%), collecting salary (84%) and drugs (71.6%).

**Table 0.22: Percent of HEWs practicing other supporting HEP activities**

| HEWs activities | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| **Planning, reporting and communication** | | | | |
| Plan and report preparation | 97.1 | 84.6 | 90.0 | 91.4 |
| Campaigns | 94.3 | 80.8 | 90.0 | 88.9 |
| Health education and communication | 82.9 | 88.5 | 75.0 | 82.7 |
| Registration of vital statistics | 88.6 | 53.9 | 75.0 | 74.1 |
| **Support, supervision and continuing education** | | | | |
| Kebele cabinet meeting | 97.1 | 57.7 | 95.0 | 83.9 |
| Review meeting with NGOs and stakeholders | 82.7 | 73.1 | 85.0 | 80.3 |
| Discussion with supervisors | 94.3 | 69.2 | 65.0 | 79.0 |
| Attending meeting | 91.4 | 57.7 | 70.0 | 75.3 |
| Meeting with CHWs | 80.0 | 57.7 | 85.0 | 74.1 |
| Refresher training | 88.6 | 42.3 | 60.0 | 66.7 |
| Supervising CHWs | 80.0 | 42.3 | 70.0 | 65.4 |
| Discussion with visitors | 42.9 | 34.6 | 50.0 | 42.0 |
| Review meeting at DHMO | 48.6 | 30.8 | 40.0 | 40.7 |
| **Travel to District offices** | | | | |
| Submitting reports | 94.3 | 92.3 | 85.0 | 91.4 |
| Collecting drug | 82.9 | 61.5 | 65.0 | 71.6 |
| Number of HEWs | 35 | 26 | 20 | 81 |

### 1.9.5 IMPOSED TASK DEMANDS

*Workload and difficulty:* About 59.3% of HEWs rated the workload assigned to them as too much, and a quarter of them rated it about right, and 16.1% rated the workload as less. However, the rating was different among the regions (table 3.23). The proportion of HEWs who rated the workload as too much was 85.7%, 60%, and 23.1% in Amhara, SNNP and Oromia regions respectively. The proportion of HEWs who rated the workload as less was 42.3%, 5% and 2.9% in Oromia, SNNP and Amhara regions respectively.

Two-thirds (67.9%) of HEWs claimed that the type of duties and responsibilities assigned to them require more training than the training they received. About 18.5% of HEWs reported the duties and responsibilities assigned to them match with the training they received, while 13.6% of them said it needs less training compared to the training they received. The agreement of the responses of HEWs on this aspect among the regions was very high (table 3.23).

**Table 0.23: Percent distribution of HEWs by rating of workload and level of difficulty of tasks**

| Factors | Rating | Percent of HEWs | | | |
|---|---|---|---|---|---|
| | | Amhara | Oromia | SNNP | Total |
| **Amount of workload** | Too much | 85.7 | 23.1 | 60.0 | 59.3 |
| | About right | 11.4 | 34.6 | 35.0 | 24.7 |
| | Less | 2.9 | 42.3 | 5.0 | 16.1 |
| **Level of difficulties** | Requires more training | 68.6 | 69.2 | 65.0 | 67.9 |
| | Match with amount of training | 17.1 | 19.2 | 20.0 | 18.5 |
| | Need less training compared | 14.3 | 11.5 | 15.0 | 13.6 |
| Total number | | 35 | 26 | 20 | 81 |

*HEWs specific skills and services they enjoy*: HEWs were asked to list the top three HEP service packages that they enjoy to perform, that they feel they have adequate skills and lack adequate skills. With regard to HEP services that HEWs enjoy to perform, the responses of HEWs in order of frequency were vaccination services (43.2%), family planning (22.2%), and construction and maintenance of sanitary latrine (11.1%). With regard to HEP services that HEWs feel they have adequate skills, the responses in order of frequency were vaccination services (39.5%), family planning (22.2%), and health education and communication (8.6%). HEP service packages that HEWs find difficulties in terms of skills were maternal and child health (22.8%), adolescent reproductive health (15.2%), and first aid (8.9%).

**Table 0.24: Top three HEP service packages that HEWs like, have adequate skills and lack adequate skills**

| Measures | HEP services | Percent of HEWs | | | |
|---|---|---|---|---|---|
| | | Amhara | Oromia | SNNP | Total |
| Enjoy most | Vaccination service | 54.3 | 26.9 | 45.0 | 43.2 |
| | Family planning | 17.1 | 26.9 | 25.0 | 22.2 |
| | Construction of sanitary latrine | 5.7 | 15.4 | 15.0 | 11.1 |
| Have adequate skills | Vaccination service | 37.1 | 42.3 | 40.0 | 39.5 |
| | Family planning | 25.7 | 15.4 | 25.0 | 22.2 |
| | Health education and communication | 11.4 | 3.9 | 10.0 | 8.6 |
| Lack adequate skills | Maternal and child health | 31.4 | 15.4 | 16.7 | 22.8 |
| | Adolescents reproductive health | 17.1 | 11.5 | 16.7 | 15.2 |
| | First Aid | 5.7 | 15.4 | 5.6 | 8.9 |
| Number of HEWs | | 35 | 26 | 20 | 81 |

## 1.10 HEP AND COMMUNITY BASED HEALTH WORKERS (CHWS)

### 1.10.1 COMMUNITY HEALTH WORKERS (CHWS)

*Type and number of CHWs*: Majority (88.9%) of HEWs reported that there are community based health workers in their respective villages with 94.3% of villages in Amhara and about 85% of villages in Oromia and SNNP regions. The average number of existing community based reproductive health agents, community health agents (CHAs), and trained/traditional birth attendants (TBAs) were 6.6, 1.2 and 2 per village respectively. Although, the average number of CHAs and TBAs were similar among the regions, the average number of CBRHAs varied among the regions (table 3.25).

**Table 0.25: Average number of community based health workers per village**

| Type of CHWs | Average number of CHWs/village | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Community based reproductive health agent | 9 | 5 | 4 | 7 |
| Community health agent | 1 | 1 | 1 | 1 |
| Trained/ traditional birth attendant | 2 | 1 | 3 | 2 |

*HEWs perception on CHWs:* The perception of HEWs on community based health workers was assessed (table 3.26). Almost all (93.1%) HEWs think that community based health workers are important for the success of HEP. About 68.1% of HEWs attested that community based health workers fully participate in the implementation of HEP, and 72.2% of HEWs confirmed that CHWs attend monthly meeting regularly. About a third (37.5%) of HEWs thinks that CHWs should be given some financial incentives.

On the other hand, about 88.9% of HEWs feel that the acceptance by the community of CHWs is better than that of HEWs. Moreover, over half (56.9%) of HEWs think that CHWs are threatened by the presence of HEWs. A quarter of HEWs (26.4%) complained that the CHWs don't work under the HEWs. A similar proportion (22.2%) of HEWs also reported that they have poor working relationship with CHWs, and 20.8% of HEWs reported that CHWs don't support the HEWs. Few HEWs (16.7%) complained that the isolated support provided to CHWs by NGOs affects the relationship between the CHWs and HEWs.

**Table 0.26: HEWs perception about the community based health workers (CHWs)**

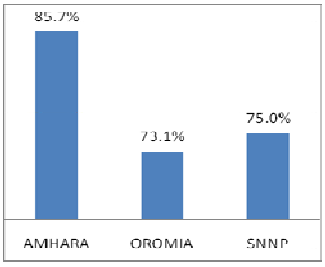
| Measures of perception | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| CHWs are important for the success of HEP | 93.9 | 90.9 | 94.1 | 93.1 |
| CHWs' acceptance by the community is better | 87.9 | 95.5 | 82.4 | 88.9 |
| CHWs come regularly to a monthly meeting in the HP | 87.9 | 54.6 | 64.7 | 72.2 |
| CHWs fully participate in the implementation of HEP | 75.8 | 45.5 | 82.4 | 68.1 |
| CHWs are threatened by HEWs | 69.7 | 50.0 | 41.2 | 56.9 |
| CHWs should be given financial incentives | 36.4 | 45.5 | 29.4 | 37.5 |
| CHWs don't work under HEWs/ health post | 30.3 | 13.6 | 35.3 | 26.4 |
| HEWs have poor working relationship with CHWs | 24.2 | 22.7 | 17.7 | 22.2 |
| CHWs don't support the HEWs/ health post | 30.3 | 22.7 | 0.0 | 20.8 |
| Isolated support CHWs get from NGOs affect our relationship | 21.2 | 18.2 | 5.9 | 16.7 |
| Number of HEWs | 33 | 22 | 17 | 72 |

The major regional differences with respect to HEWs perception on CHWs were on: attending monthly meetings, full participation on HEP implementation, and financial incentives to CHWs. The proportion of HEWs who reported that CHWs attend monthly meetings regularly was higher in Amhara (87.9%) than in Oromia (54.6%). The proportion of HEWs who attested that CHWs fully participate in the implementation of HEP was higher in SNNP (82.4%) and Amhara (75.8%) than in Oromia (45.5%). The low attendance of monthly meetings and lack of full participation of CHWs in Oromia might have resulted to the high proportion of HEWs (45.5%) in Oromia who think that CHWs should be given financial incentives.

### 1.10.2 VOLUNTEER COMMUNITY HEALTH WORKERS/PROMOTERS

Majority (80.2%) of HEWs have formed volunteer CHWs/promoters since they have started working in their village. Higher percentage of HEWs in Amhara (85.7%) formed volunteer CHWs/promoters than HEWs in Oromia (73.1%) and SNNP (75%) regions. The overall average number of newly formed promoters was about 13 per HEW, with huge variation among the regions.

**Figure 0.7: Percent of HEWs who formed volunteer CHWs/Promoters by region**




The average number of newly formed promoters per HEW was 17.7, 9.4 and 7.8 in Amhara, Oromia, and SNNP respectively. The average number of currently active HEWs/promoters (which includes the already existing CHWs and newly formed promoters) was 15 per HEW. There was also variation by region with 19, 12 and 10 currently active CHW/promoters per HEW in Amhara, Oromia and SNNP respectively.

**Table 0.27: Number of Volunteer CHWs/Promoters formed and currently active**

| | Amhara | | Oromia | | SNNP | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Formed | Active | Formed | Active | Formed | Active | Formed | Active |
| Min. | 2 | 0 | 2 | 1 | 1 | 4 | 1 | 5 |
| Max. | 58 | 64 | 63 | 63 | 25 | 24 | 63 | 64 |
| Average | 17.71 | 19.3 | 9.39 | 12.5 | 7.78 | 10 | 12.9 | 15.1 |

## 1.11 HEP AND THE COMMUNITY

### 1.11.1 UTILIZATION OF HEP SERVICES BY THE COMMUNITY

HEWs were asked for the HEP services for which they are most commonly consulted or approached by the community. The responses of HEWs in order of frequency were family planning (84%), treatment of illnesses such as malaria and diarrhea (64.2%), immunization (60.5%), eye problem (43.2%), first aid (40.7%), delivery (33.3%), infections (24.7%) and HIV counseling and testing (17.3%). There was some difference among the regions as presented in table 3.28.

**Table 0.28: Percent of HEWs consulted for various HEP services by community**

| HEP services | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Family planning | 100.0 | 61.5 | 85.0 | 84.0 |
| Primary treatment of illnesses | 80.0 | 57.7 | 45.0 | 64.2 |
| Immunization | 77.1 | 57.7 | 35.0 | 60.5 |
| Eye problem | 65.7 | 19.2 | 35.0 | 43.2 |
| First aid | 65.7 | 30.8 | 10.0 | 40.7 |
| Delivery | 42.9 | 30.8 | 20.0 | 33.3 |
| Infection | 34.3 | 19.2 | 15.0 | 24.7 |
| HIV counseling and testing | 25.7 | 11.5 | 10.0 | 17.3 |
| Disease outbreaks investigation. . | 25.7 | 3.9 | 10.0 | 14.8 |
| Total number | 35 | 26 | 20 | 81 |

HEWs were asked their observation on what proportion of the people in the village uses the HEP services (table 3.29). About a third (35.8%) of HEWs reported that all people in the village use the HEP services, and another 37% of HEWs reported that majority of the people in the village use the HEP services. About a quarter (27.2%) of HEWs reported that half or less people in village use HEP services. The main reasons for not using the HEP services by some group of the community, according to HEWs, were lack of

awareness (31.8%), some people only interested on curative services rather than preventive and promotive services (22.7%), and since the HEP service is new in the village (18.2%). The regional distribution is presented in table 3.30.

**Table 0.29: Percent distribution of HEWs perception on proportion of people who use HEP services**

| HEWs' perception on proportion of people who use HEP | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| All people use the service | 22.9 | 50.0 | 40.0 | 35.8 |
| Majority of people use the services | 34.3 | 38.5 | 40.0 | 37.0 |
| About half of the people use the services | 8.6 | 3.9 | 15.0 | 8.6 |
| Only few of the people use the services | 34.3 | 3.9 | 5.0 | 17.3 |
| None use the services | 0.0 | 3.9 | 0.0 | 1.2 |
| Total number | 35 | 26 | 20 | 81 |

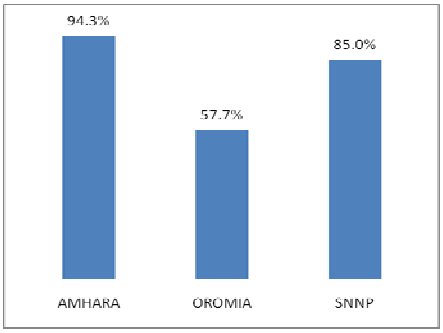
**Table 0.30: Percent of HEWs with opinion on reasons of the community for not using the HEP services**

| Reason for not using HEP by community (HEWs' opinion) | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Lack of Awareness | 26.7 | 33.3 | 50.0 | 31.8 |
| Want Curative service | 26.6 | 33.3 | 0.0 | 22.7 |
| Because of the service is new | 20.0 | 0.0 | 0.0 | 18.2 |
| Total number | 15 | 3 | 4 | 22 |

### 1.11.2 MODEL HOUSEHOLD PACKAGE SERVICES

About 80% of HEWs have initiated model household package services in their village. The percentage of HEWs who have initiated model household package services varied by region - with 94.3% in Amhara, 85% in SNNP, and 57.7% in Oromia (figure 3.8). Each HEW who initiated a model household package services visit an average of about 15 households per day. There was a huge variation by region. HEWs in Amhara, Oromia, and SNNP reported that they visit an average of 10, 60, and 41 households per day, respectively. The number of households visited per day in Oromia and SNNP seems to be exaggerated.

**Figure 0.8: Percent of HEWs initiated a model household package service**




The average number of visits HEWs made to each model household was 12 times per month per household. The number of visits to each model household per month varied by region with 5, 23, and 15 visits per month in Amhara, Oromia, and SNNP regions respectively. Number of model households who were trained and graduated until the survey was conducted varied between and within regions (table 3.31). The overall average number of model households graduated was 43 per HEW, with 45, 32, and 50 model households from Amhara, Oromia, and SNNP regions, respectively. The number of model households graduated per HEW ranged from 2 to 150 households.

**Table 0.31: Characteristics of model household package implementation**

| Implementation characteristics | Measures | Number of households or visits | | | |
|---|---|---|---|---|---|
| | | Amhara | Oromia | SNNP | Total |
| No. of model households visited per day | Minimum | 1 | 5 | 1 | 1 |
| | Maximum | 10 | 60 | 41 | 60 |
| | Average | 6 | 41 | 9 | 15 |
| No. of visits to each model household per month | Minimum | 1 | 2 | 1 | 1 |
| | Maximum | 42 | 80 | 88 | 88 |
| | Average | 4.8 | 22.8 | 14.7 | 11.5 |
| No. of model households graduated | Minimum | 2 | 2 | 20 | 2 |
| | Maximum | 150 | 60 | 92 | 150 |
| | Average | 44.6 | 31.7 | 49.8 | 42.9 |
| No. of visits per got per month for non-model household activities | 0 | - | 1 | - | 1 |
| | Minimum | 1 | 1 | 1 | 1 |
| | Maximum | 30 | 52 | 20 | 52 |
| | Average | 6.4 | 12.2 | 7.5 | 8.5 |

## 1.12 SUPPORT AND CONTINUING EDUCATION

### 1.12.1 RE-FRESHER TRAINING COURSES

More than half (55.6%) of the HEWs attended refresher courses in the last one year preceding the survey (table 3.32). The proportion of HEWs who attended at least one refresher course over the last one year was higher in Amhara (85.7%) compared with HEWs in Oromia (30.8%) and SNNP (35%). About a third of the HEWs attended at least two sessions of refresher courses over the year preceding the survey, and the proportion was higher in Amhara (48.7%) than SNNP (30%) and Oromia (15.4%) regions.

**Table 0.32: Percent distribution of HEWs by number of refresher sessions attended, funding, and prefered topics**

| Characteristics of refresher training | | Percent of HEWs | | | |
|---|---|---|---|---|---|
| | | Amhara | Oromia | SNNP | Total |
| Number of training sessions attended | 0 | 14.3 | 69.2 | 65.0 | 44.4 |
| | 1 | 37.1 | 15.4 | 5.0 | 22.2 |
| | 2 | 22.9 | 3.9 | 25.0 | 17.3 |
| | 3 | 11.4 | 11.5 | 5.0 | 9.9 |
| | 5 | 8.6 | 0.0 | 0.0 | 3.7 |
| | 8 | 2.9 | 0.0 | 0.0 | 1.2 |
| | 9 | 2.9 | 0.0 | 0.0 | 1.2 |
| Funding organization of refresher trainings | Ministry of health | 36.7 | 62.5 | 71.4 | 46.7 |
| | NGO | 10.0 | 12.5 | 28.6 | 13.3 |
| | Both | 53.3 | 25.0 | 0.0 | 40.0 |
| | Total Number | 30 | 8 | 7 | 45 |
| Preferred refresher course | Delivery service | 62.9 | 26.9 | 35.0 | 44.4 |
| | MCH | 8.6 | 11.5 | 5.0 | 8.6 |
| | All packages | 2.86 | 15.4 | 5.0 | 7.4 |
| | Vaccination | 0.0 | 19.2 | 5.0 | 7.4 |
| | HIV/AIDS | 2.86 | 0.0 | 10.0 | 3.7 |
| | Total Number | 35 | 26 | 20 | 81 |

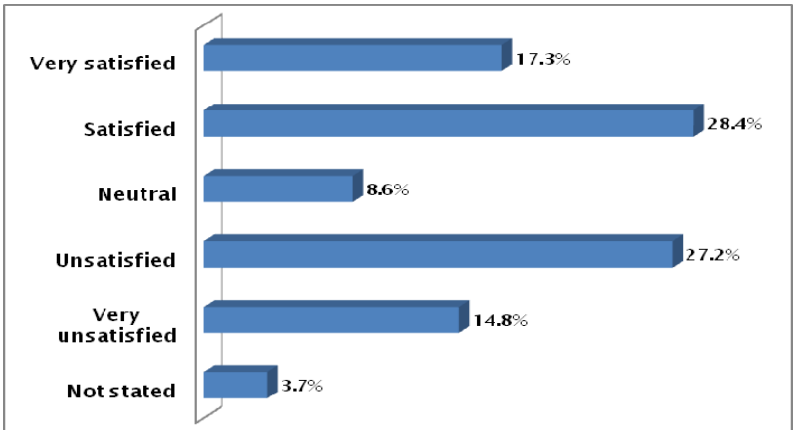
**Refresher course needed**

If there was one refresher course planned, HEWs were asked to identify one HEP service area they would have preferred the refresher training to be on. The most frequently mentioned HEP service was delivery services (44.4%), and the other responses are presented in table 3.32.

**Satisfaction**

The proportion of HEWs who reported satisfaction (very satisfied or satisfied) about the refresher courses they received was 45.7%.

**Figure 0.9: Percent distribution of HEWs by the level of overall satisfaction with refresher courses**

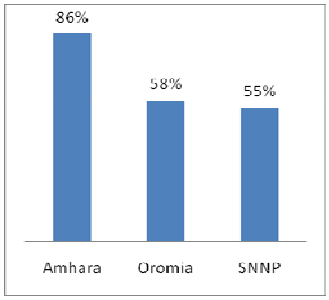



## 1.12.2 SUPERVISION

With the rapid expansion of HEP and increasing numbers of health posts in even remote areas, supervision is crucial to link the health posts and the DHMO. It is important in performance and staff motivation, and should include problem solving, reviewing records, and observing practice. The ultimate purpose of supervision is to increase acceptance and use of services. Supervision can minimize the effects of poorly trained and qualified staff and poor communication between the health system tiers.

*Supervision rate:* Less than two-thirds of the HEWs reported that they were supervised at least once by someone working at the District Health Management Office during the three months preceding the survey. However, there was variation among the three regions. About 85% of HEWs in Amhara region were supervised, while only 57.7% and 55% of HEWs in Oromia and SNNP regions respectively were supervised at least once in the three months preceding the survey.

**Figure 0.10: Percent of HEWs supervised in the three months preceding the survey by region**



*Frequency of supervision:* Among the HEWs who reported that they were supervised during the last three months, 50% of them were supervised every month. The frequency of supervision in a quarter of the HEWs was every two months, while about 13% were supervised every three or more months. Regional information is presented in table 3.33.

**Table 0.33: Percent distribution of HEWs by frequency of supervision by region**

| Frequency of supervision | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| 1 month | 40.9 | 63.6 | 60.0 | 50.0 |
| 2 months | 27.3 | 18.2 | 40.0 | 26.3 |
| >2 months | 22.8 | 0 | 0 | 13.1 |
| Not stated | 9.1 | 18.2 | 0.0 | 10.5 |
| Total number | 22 | 11 | 5 | 38 |

Method of supervision: The methods of supervision employed by the district supervisors in order of frequency were person-to-person discussions (60.5%), talking to local community members and leaders (22.2%), and review of reports (19.8%). None of the HEWs were supervised by observation method, which would be best for development of skills. Regional data is shown in table 3.34.

Regularity of supervision: Overall, 60% of HEWs reported that the supervisory visits were regular; however, there was variation between the regions with 70%, 53.3%, and 45.5% of HEWs in Amhara, Oromia, and SNNP regions respectively having regular supervision. Regional data is shown in table 3.34.

Supportiveness of supervision: Majority (93%) of HEWs reported that the last supervision by DHMO was supportive. One of the roles of a supervisor is to help the HEWs manage problems more effectively and provide re-assurance and emotional support. Such supervision approach encourages improvements in the procedures, personal interactions, and management of primary health care facilities leading to improved services. Regional data is shown in table 3.34.

**Table 0.34: Percent distribution of HEWs by quality of the last supervision**

| Measures of quality of last supervision | | Percent of HEWs | | | |
|---|---|---|---|---|---|
| | | Amhara | Oromia | SNNP | Total |
| **Method of supervision** | Person to person discussions | 77.1 | 53.9 | 40.0 | 60.5 |
| | Progress reports are submitted | 17.1 | 11.5 | 35.0 | 19.8 |
| | Supervisor talks to local people and leaders | 14.3 | 38.5 | 15.0 | 22.2 |
| **Regularity** | Regular | 70.0 | 53.3 | 45.5 | 60.7 |
| **Supportiveness** | Supportive | 90.0 | 93.8 | 100.0 | 93.0 |
| **Type of feedback** | Get regular oral feedback | 33.3 | 75.0 | 54.6 | 49.1 |
| | Get regular written feedback | 26.7 | 6.3 | 18.2 | 19.3 |
| | Get few oral feedback | 16.7 | 12.5 | 9.1 | 14.0 |
| | Get few written feedback | 0.0 | 0.0 | 9.1 | 1.8 |
| | Never get any feedback | 13.3 | 0.0 | 9.1 | 8.8 |
| **Nature of comments given** | Positive | 70.0 | 80.0 | 45.5 | 67.9 |
| | Negative | 3.3 | 0.0 | 0.0 | 1.8 |
| | Equal | 26.7 | 6.7 | 45.5 | 25.0 |
| **Guidance** | Useful | 100 | 100 | 84.2 | 96.3 |

Feedback: Majority of HEWs who were supervised reported that they receive feedback. The types of feedback in order of frequency were regular oral feedback (49.1%), regular written feedback (19.3%), few oral feedbacks (14%), and few written feedback (1.8%). About two-third (67.9%) of HEWs reported that more positive comments than negative were given, while a quarter felt that equal positive and negative comments were given. Regional data is shown in table 3.34.

Guidance: Almost all (96.3%) of HEWs received guidance on the technical aspects of services from their supervisors (table 3.34), which contributes in the provision of high-quality health care.

*Perception of HEWs on working relationship with supervisors*

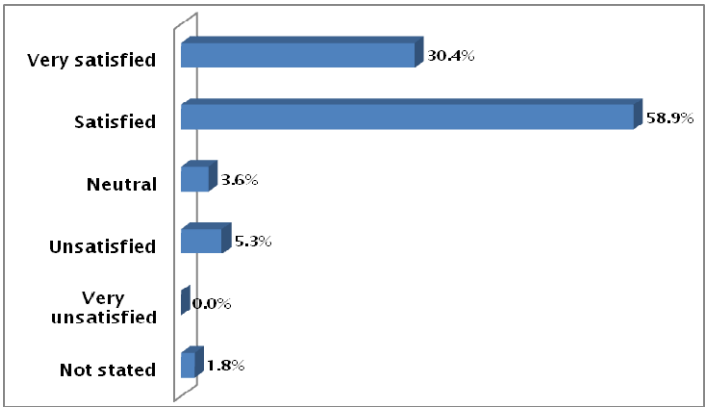
Majority (95%) of HEWs feel that their supervisors encourage them to work as a team; 85.2% of HEWs reported that their supervisor make them feel that they are a valued and important part of the team; and 85.2% of HEWs said that their supervisor supports HEWs' suggestions that are meant to correct existing problems. Three-quarter of HEWs reported that their supervisors encourage them to participate in decision making that affect the work environment. HEWs were asked to list their expectation from supervision, and the HEWs responses in order of frequency were to learn new things from supervisors (25.9%), to get good advice and support (23.5%), to correct my fault and improve my skill (17.3%), motivation (13.6%), and share experience (12.4%). Percent of HEWs by region is shown in table 3.35.

**Table 0.35: HEWs' perception on supervisors and expectations from supervision**

| | | Percent of HEWs | | | |
|---|---|---|---|---|---|
| **HEWs' perception and expectation from supervisors** | | **Amhara** | **Oromia** | **SNNP** | **Total** |
| **HEWs' perception about supervisors** | Supervisor encourages team work | 97.1 | 92.3 | 94.7 | 95.0 |
| | Supervisor makes HEWs feel valued and important | 85.7 | 84.6 | 85.0 | 85.2 |
| | Supervisor supports HEWs' suggestions | 94.3 | 84.6 | 70.0 | 85.2 |
| | Supervisor encourages participation in decision making | 74.3 | 73.1 | 75.0 | 74.1 |
| **HEWs' expectation from supervision** | To learn new things from the supervisors | 22.9 | 19.2 | 40.0 | 25.9 |
| | To get good advice and support | 28.6 | 19.2 | 20.0 | 23.5 |
| | To correct fault and improve skill | 20.0 | 15.4 | 15.0 | 17.3 |
| | Motivation | 20.0 | 3.9 | 15.0 | 13.6 |
| | To share experience | 17.1 | 11.5 | 5.0 | 12.4 |
| **Number** | | 35 | 26 | 20 | 81 |

*Overall satisfaction with supervision:* Overall satisfaction of HEWs with supervision was high, with 89.3% of HEWs very satisfied/satisfied. Level of satisfaction was similar among the regions.

**Figure 0.11: Percent distribution of HEWs by the level of overall satisfaction with supervision**



### 1.12.3 INFORMATION AND COMMUNICATIONS

The sources of information for HEWs about new developments in the health sector in order of frequencies mentioned by HEWS were supervisor (58%), refresher course (49.4%), radio (42%), workmates (35%), newsletter (18.5%), newspaper (11.1%), and television (9.9%). There was some variation by region as presented in table 3.36.

**Table 0.36: Percent of HEWs by source of information about new developments in health sector**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Source of information** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Supervisors | 74.3 | 38.5 | 55.0 | 58.0 |
| Refresher courses | 65.7 | 19.2 | 60.0 | 49.4 |
| Radio | 48.6 | 42.3 | 30.0 | 42.0 |
| Workmates | 40.0 | 30.8 | 35.0 | 35.8 |
| Newsletters | 25.7 | 0.0 | 30.0 | 18.5 |
| Newspapers | 14.3 | 3.9 | 15.0 | 11.1 |
| TV | 8.6 | 0.0 | 25.0 | 9.9 |
| Other | 8.6 | 15.4 | 10.0 | 11.1 |

## 1.13 RELATIONSHIP WITH RELEVANT ORGANIZATIONS/INSTITUTIONS

Majority of HEWs reported that they have very good or good relations/partnership with most organizations/institutions that have working connections with HEP. About 90% of HEWs said they have very good or good relationship with DHMO, and about three quarter of HEWs said they have very good or good relationship with village cabinet (74%), local community (72.8%) and health center staff (71.7%). More than two-third of HEWs also reported to have very good or good relationship with agriculture workers. Only a third of HEWs reported to have very good or good relationship with NGOs.

**Table 0.37: Percent distribution of HEWs by strength of relations with relevant organizations**

| | Percent of HEWs | | | | | |
|---|---|---|---|---|---|---|
| **Institutions** | **Very good** | **Good** | **Fair** | **Bad** | **Very bad** | **Never interacted** |
| Wereda health office | 35.8 | 54.3 | 7.4 | 1.2 | 1.2 | 0.0 |
| Village cabinet | 27.2 | 46.9 | 13.6 | 4.9 | 4.9 | 0.0 |
| Local community | 39.5 | 33.3 | 23.5 | 0.0 | 2.5 | 0.0 |
| Health center staff | 23.5 | 48.2 | 12.4 | 4.9 | 2.5 | 6.2 |
| Agriculture worker | 25.9 | 43.2 | 24.7 | 1.2 | 3.7 | 0.0 |
| School community | 11.1 | 48.2 | 32.1 | 2.5 | 1.2 | 3.7 |
| NGOS | 8.8 | 25.0 | 5.0 | 2.5 | 46.3 | 12.5 |

### 1.13.1 KEBELE CABINET AND HEWS

About a quarter (27.2%) of HEWs reported that they were member of local committee or kebel cabinet, however, most of these HEWs were from Amhara and Oromia regions. The proportion of HEWs who were members of local committee or kebele cabinet in Amhara and Oromia regions were 42.9% and 23.1% respectively, while it was only 5% in SNNP region.

### 1.13.2 DHMO AND HEWS

Majority (66.7%) of HEWs said that the DHMO provides them with opportunity to improve their professional knowledge and job skills. Three-quarter of HEWs feel that the DHMO communicates

information with HEWs that they need to know. Majority of HEWs feel that the managers of the DHMO are concerned with accomplishment (table 3.38).

**Table 0.38: Percent of HEWs with positive perception about DHMO**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Measures of perception** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Provide opportunity to improve HEWs' profession | 88.6 | 34.6 | 70.0 | 66.7 |
| Communicate information with HEWs | 77.1 | 84.6 | 60.0 | 75.3 |
| DHMO is concerned with accomplishment | 91.4 | 80.8 | 80.0 | 85.2 |
| Total number | 35 | 26 | 20 | 81 |

### 1.13.3 NON-GOVERNMENTAL ORGANIZATIONS (NGOS) AND HEWS

About a third of HEWs reported that there were NGOs working on health in their respective villages, but mainly in SNNP region (50%). All the HEWs who work in the villages where there were NGOs reported that they participate in the activities of the NGOs working on health in their respective villages. Among the HEWs who were participating in the activities of the NGOs, a third (36%) of them reported that their involvement with the NGOs strain their HEP work schedule. Majority (70%) of HEWs in SNNP reported their involvement with NGOs strain their work schedule.

**Table 0.39: Non-Governmental Organizations working in health and HEWs**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Characteristics of relationship** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| NGOs working on health in the village | 28.6 | 19.2 | 50.0 | 30.9 |
| HEWs participate in the activities of NGOs | 100.0 | 100.0 | 100.0 | 100.0 |
| Involvement with NGOs strains HEP schedule | 20.0 | 0.0 | 70.0 | 36.0 |

### 1.13.4 HYPOTHETICAL DEPLOYMENT OF NURSES IN HEALTH POSTS

HEWs were asked various questions for their views on hypothetical assignment of a nurse at the health post to work with them. More than half of HEWs feel that the curative service of HEP would improve, and about a quarter (28.4%) of HEWs feel that it would strengthen the technical skills of HEWs, and 27.2% of HEWs feel that HEP in general would be strengthened. On the other hand, 35.8% of HEWs feel that it would reduce their acceptance by the community, 22.2% of HEWs feel that it would weaken the preventive and promotive services, and a quarter (24.7%) of HEWs feel that HEP in general would be weakened. One-in-five HEWs feel that with orientation and good relationship with HEWs, it would improve HEP.

**Table 0.40: Percent of HEWs expressing their perception of assigning a nurse at the health post**

| | Percent of HEWS | | | |
|---|---|---|---|---|
| **HEWs' perception** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| The curative service would improve | 60.0 | 57.7 | 55.0 | 58.0 |
| It would reduce HEWs acceptance by the community | 34.3 | 38.5 | 35.0 | 35.8 |
| It would strengthen the technical skills of HEWs | 17.1 | 42.3 | 30.0 | 28.4 |
| HEP in general would be strengthened | 25.7 | 34.6 | 20.0 | 27.2 |
| HEP in general would be weakened | 22.9 | 34.6 | 15.0 | 24.7 |
| With orientation and good relationship HEP would improve | 17.1 | 30.8 | 20.0 | 22.2 |
| The preventive and promotive service would be weakened | 22.9 | 26.9 | 15.0 | 22.2 |
| Total number | 35 | 26 | 20 | 81 |

## 1.14 CHALLENGES AND CONSTRAINTS

### 1.14.1 TECHNICAL CHALLENGES

The top four technical constraints that affect the performance of HEWs in their functions in order of the frequencies mentioned by HEWs were irregular supply of vaccines & lack of storage and carriage facility for vaccines (33.3%), irregular/no supply of drugs (12.4%), lack of adequate skill (8.6%), and no supervision (7.4%).

**Table 0.41: Percent of HEWs expressing technical constraint that prevent performance of HEWs**

| Constraints | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Irregular vaccine supply & lack of storage & carriage facility | 37.1 | 34.6 | 25 | 33.3 |
| Irregular/no supply of drugs | 11.4 | 0.0 | 30 | 12.4 |
| Lack of adequate skill | 0.0 | 19.2 | 10 | 8.6 |
| No supervision | 14.3 | 3.9 | 0 | 7.4 |
| No emergency kit to deal with outbreaks | 8.6 | 7.7 | 5 | 7.4 |
| Not stated | 2.9 | 3.9 | 5 | 3.7 |
| Total number | 35 | 26 | 20 | 81 |

Because of the technical constraints, 9.9% of HEWs feel that 50% or more of their professional inputs were not utilized. About a quarter (27.2%) of HEWs feels that 30-49% of their professional inputs were not utilized because of the technical constraints. About half of HEWs feel that 10-29% of their professional inputs were not utilized. Only 9.9% of HEWs feel that less than 10% of their professional inputs were not utilized.

**Table 0.42: Percent distribution of HEWs by percent of professional input not utilized due to technical constraints**

| % of input not utilized | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| <10% | 11.4 | 7.7 | 10.0 | 9.9 |
| 10-19% | 42.9 | 7.7 | 20.0 | 25.9 |
| 20-29% | 17.1 | 34.6 | 30.0 | 25.9 |
| 30-50% | 28.6 | 26.9 | 25.0 | 27.2 |
| 50+% | 0.0 | 15.4 | 15.0 | 9.9 |
| Not stated | 0.0 | 7.7 | 0.0 | 2.5 |
| Total number | 35 | 26 | 20 | 81 |

### 1.14.2 SOCIAL OBSTACLES

HEWs have identified a number of social obstacles that they think affect their work. The most commonly stated social obstacles were poor road networks (49.4%), working in remote areas (35.8%), poor relation with community (22.2%), poor communication system (16.1%), and cultural values of the community (16.1%). The other social obstacles include their gender, lack of community awareness, religion, and their age and marital status. Detailed information is presented by region in the table below.

**Table 0.43: Percent of HEWs with social obstacles impending their work**

| Social obstacles | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Poor road networks | 54.3 | 53.9 | 35.0 | 49.4 |
| Working in remote areas | 40.0 | 42.3 | 20.0 | 35.8 |
| Poor relations with the community | 14.3 | 38.5 | 15.0 | 22.2 |
| Poor communication system | 17.1 | 15.4 | 15.0 | 16.1 |
| Cultural values of the community | 14.3 | 15.4 | 20.0 | 16.1 |
| My gender | 8.6 | 23.1 | 15.0 | 14.8 |
| Lack of community awareness | 14.3 | 15.4 | 10.0 | 13.6 |
| My religion | 8.6 | 11.5 | 10.0 | 9.9 |
| My age | 2.9 | 3.9 | 10.0 | 4.9 |
| My marital status | 5.7 | 7.7 | 10.0 | 7.4 |

### 1.14.3 ORGANIZATIONAL FACTORS

HEWs identified a number of organizational factors that impede their performance in the kebele. The organizational factors identified by HEWs in order of frequency were no refresher courses (29.6%), mobility problem (21%), too much meetings (19.8%), no promotion (18.5%), and shortage of budget (18.5%). About 43.2% of HEWs feel that their efforts are not productive because of the organizational factors over which they have no control.

**Table 0.44: Percent of HEWs with organizational factors impending their work**

| Organizational factors | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| No refresher courses | 17.1 | 50.0 | 25.0 | 29.6 |
| Mobility problems (e.g. no transport) | 25.7 | 15.4 | 20 | 21.0 |
| Too much meeting | 14.3 | 19.2 | 30.0 | 19.8 |
| No promotion | 25.7 | 7.7 | 20.0 | 18.5 |
| Shortage of budget | 20.0 | 7.7 | 30.0 | 18.5 |
| Unable to work cooperatively with stakeholders | 22.9 | 0.0 | 10.0 | 12.4 |
| Low remuneration | 5.7 | 23.1 | 5.0 | 11.1 |
| Poor relations with supervisors | 8.6 | 7.7 | 15.0 | 9.9 |
| Inadequate stationery | 0.0 | 7.7 | 5 | 3.7 |
| Total number | 35 | 26 | 20 | 81 |

### 1.14.4 FACTORS AFFECTING HEWS' MOTIVATION

About a third (35.8%) of the HEWs expressed some specific grievance that affect their motivation and impede their performance. However, the proportion of HEWs who expressed grievance was higher in Amhara (48.6%) compared to Oromia (26.9%) and SNNP (25%) regions. HEWs who expressed grievance were asked to list the factors that affect their motivation and impede their performance. The factors most commonly identified by HEWs in order of frequency were uncomfortable working place (27.6%), mistaken information about HEWs (27.6%), low acceptance of HEWs by community (24.1%), no opportunity for upgrade and training (17.2%), and poor relationship with kebele cabinet (17.2%).

**Table 0.45: Percent of HEWs with factors that affect their motivation and impede their performance**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Factors** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Uncomfortable working place | 23.5 | 42.9 | 20.0 | 27.6 |
| Mistaken information about the HEWs | 41.2 | 0.0 | 20.0 | 27.6 |
| Low acceptance of HEWs by community | 23.5 | 28.6 | 20.0 | 24.1 |
| No opportunity for upgrade and training | 23.5 | 14.3 | 0.0 | 17.2 |
| Poor relationship with the kebele Cabinet | 11.8 | 28.6 | 20.0 | 17.2 |
| Number of HEWs | 17 | 7 | 5 | 29 |

### 1.14.5 MEASURES TO IMPROVE QUALITY OF SERVICES

*Health post*: HEWs were asked to suggest changes to their health post that would help in meeting the overall objectives of HEP. The changes suggested most commonly by HEWs were to fulfill drugs, necessary equipments and other facilities (37%), refresher training for different health packages (22.2%), to work cooperatively with kebele cabinet and DHMO (18.5%), and provision of clean water, electricity, telephone and housing (18.5%).

**Table 0.46: Percent of HEWs who suggested measures to improve the health posts**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Suggested measures of change** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Fulfill drugs, equipments and other facilities | 42.9 | 11.5 | 60.0 | 37.0 |
| Refresher training for different package | 28.6 | 19.2 | 15.0 | 22.2 |
| Work cooperatively with kebele cabinet, DHMO & stakeholder | 22.9 | 23.1 | 5.0 | 18.5 |
| Clean Water supply , electricity, telephone and Housing | 17.1 | 15.4 | 25.0 | 18.5 |
| Total number | 35 | 26 | 20 | 81 |

*Motivation*: The HEWs who participated in this study identified upgrading their skills (49.4%) and re-fresher course (17.3%) as two major measures to improve both motivation and quality of services. About 12.4% of HEWs also identified increment of salary as a measure to improve motivation and quality of services. Other measures identified by fewer HEWs include performance appraisal (4.9%), supportive supervision (3.7%), promotion (3.7%), additional HEWs (3.7%) and availability of communication system (1.2%).

**Table 0.47: Percent of HEWs who suggested measures to improve motivation of HEWs**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Suggested measures** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Upgrade | 51.4 | 46.2 | 50.0 | 49.4 |
| Re-fresher training | 11.4 | 23.1 | 20.0 | 17.3 |
| Salary increment | 14.3 | 15.4 | 5.0 | 12.4 |
| Performance appraisal | 2.9 | 7.7 | 5.0 | 4.9 |
| Supportive supervision | 2.9 | 3.9 | 5.0 | 3.7 |
| Promotion | 5.7 | 3.9 | 0.0 | 3.7 |
| Additional HEW's | 5.7 | 0.0 | 5.0 | 3.7 |
| Communication system | 2.9 | 0.0 | 0.0 | 1.2 |
| Other | 0.0 | 0.0 | 10.0 | 2.5 |
| Total number | 35 | 26 | 20 | 81 |

*General measures*: HEWs were asked for suggestions they have for the improvement of HEP in the country. The responses of HEWs in order of frequency were upgrade HEWs (51.9%), refresher course

(24.7%), on job training (24.7%), equipping health post with furniture, drugs, and medical equipments (23.5%), and supervision (17.3%).

**Table 0.48: Percent of HEWs who suggested measures to improve HEP in Ethiopia**

| Suggested measures to improve HEP in Ethiopia | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Upgrading | 40.0 | 65.4 | 55.0 | 51.9 |
| Refresher course for different packages | 28.6 | 11.5 | 35.0 | 24.7 |
| On job training | 28.6 | 11.5 | 35.0 | 24.7 |
| Equip HP with furniture, drugs, and equipment | 22.9 | 11.5 | 40.0 | 23.5 |
| Supervision | 17.1 | 15.4 | 20.0 | 17.3 |
| Total number | 35 | 26 | 20 | 81 |

## 1.15 CONCLUSIONS AND DISCUSSION

The total number of HEWs interviewed were 81, which were from Amhara (35), Oromia (26) and SNNP (20) regions. The average age of the HEWs was 22 years. The main reason for joining HEP for about half of the HEWs was to help the community, which will contribute to the success of HEP because such attitude is critical for the motivation of health workers. Majority of HEWs came from either the village or district they serve, and a little less than half of HEWs joined HEP to find job. Thus, HEP is contributing as source of income, an opportunity for women to do social work, obtain a sense of achievement in their lives and thus improve their social lives as well. In our opinion, the program has both direct and indirect effects towards empowering women and improving the status of women and hence plays an important role in the development of women.

### Living and working conditions of HEWs

Housing of HEWs: Differences have been observed on the living conditions of HEWs in particular on where they are living. Some of the HEWs pay for house rent and live outside of the health post, and others live in one of the rooms of the health post free of charge. There should be uniformity and all HEWs should be able to get housing for free preferably inside the health post as this could have significant impact on the day to day activities of the program. Ownership of equipments and animals has been improved from similar study conducted in 2005, and this would have impact to retain the HEWs in the same village for considerable period of time.

Salary of HEWs: Taking the recommended minimum wage per day for frontline staff in Ethiopia, majority of the sampled HEWs was getting the recommended minimum wage. There was variation within and between the regions, although the variation on the average salary by region was minimal. The majority of HEWs collect their monthly salary from the district town ether from the district finance or health office. This transaction compounded with lack of transportation may impact negatively with the efficiency of the HEWs and effectiveness of the HEP.

Overall, majority of HEWs feel that their monthly salary is disproportionately low for the workload they have and level of training they received. Moreover, significant proportion of the HEWs feels that their salary is lower as compared to other government employees with similar educational background. The level of dissatisfaction was higher among HEWs in Oromia region and they feel that their monthly salaries were not sensitive to the workload and their education levels and perceived that their monthly salary is very low compared to other government employees with similar educational background. In fact, the average regional salary was similar in Oromia and SNNP regions but their perception on salary and

workload was more positive than those in Oromia. Indeed, when the reported salaries were explored by HEW length of service as HEWs, the results do not show consistency in the salary levels among regions. For example the maximum salary level for sampled HEWs from Amhara and Oromia was found Birr 716 and 760 respectively. The expectation would have been that HEWs with more years of services (like the case in Amhara) get a higher salary than HEWs with less length of service (eg. Oromia). Generally, majority (60.5%) of the HEWs expressed overall satisfaction on the amount of their monthly salary.

Benefits: Apart from salaries, some of the sampled HEWs reported to have other benefits attached to their work in the form of field allowances, training and transport allowances. However, less than half of sampled HEWs were satisfied with the benefits they received.

Means of transportation: The average estimated time HEWs spent to reach the furthest sub-village within Kebele from the health post using the usual mode of transportation (walking) was found to be more than one hour. Moreover, majority of HEWs travel by foot from the village to district health office to execute HEP support activities and collect salary. Considerable time which can be used for other activities of the HEP has been spent on walking long distances in or outside of the village. This situation has implications in terms of efficiency and productivity of HEWs. This calls for exploring appropriate means of transportation within the village to cut the time lost in walking; and exploring alternative means of providing supplies to the health posts to reduce the time spent traveling between the district and village to improve the efficiency and quality of HEP services delivery. HEWs have suggested the best means of transportation within the village, and between the village and district. In exploring the best means of transportation, the regional difference in the suggested means of transportation should be taken into consideration because the variation may indicate topographic variability and availability of infrastructure. Many HEWs preferred to have motorcycle for transportation to the DHMO and also for the routine house to house visits within the village. It is therefore, important to identify potential donors who may have interest to support transportation for the Health Extension Program in Ethiopia.

Motivation of HEWs: Generally, HEWs are poorly motivated in all three regions with some variation. About a third of the HEWs expressed some specific grievance that affect their motivation and impede their performance. The reasons included lack of rewards and incentives, poor facilities, mistaken information about HEWs, low acceptance of HEWs by community, poor opportunity for upgrade and training, and poor relationship with Kebele cabinet.

## Execution of HEP activities

Knowledge and reception of job description: Although majority of HEWs reported that they were served with job description, a third of HEWs said they did not. The majority of the HEWs that were not served with job description and never went through induction process were from Oromia region, which comprises half of the HEWs. This finding is somewhat worrying because it might indicate some disorganization in the process of recruitment and induction. This has implications in terms of performance of the HEP as job descriptions describe the contractual obligations, duties and responsibilities and expectations of interested parties in HEP so that all those concerned enter into an agreement and sign for it with a common understanding. These job descriptions allow them to know exactly what is expected of them and what they should expect in return from the employer in terms of both technical and logistical support, as well as remuneration.

HEP Performance Management System: In order for HEP to be successfully executed, a functioning performance management system, which includes planning, performing and reviewing, should be in

place to be used by HEWs and managers. Only half of the HEWs reported that they had work plan. The involvement of the various stakeholders in HEP planning was also low. The HEP model promotes a participatory approach that is sensitive to gender, equity, and cultural issues, through which the community arrives at a better understanding of healthy pregnancy, delivery, and newborn care, as well as maternal and newborn health problems. Community members and leaders are key stakeholders to the planning and decision-making process to improve health care of their community. However, the low involvement of key stakeholders indicates lack of relationship between the performance management system and HEWs' daily work objectives, and lack of incorporation of client and other stakeholder perspectives. Planning system that involves stakeholders has implications in realizing the true benefits of HEP interventions.

On the other hand, majority of HEWs reported that performance evaluation exists, which was reported to be helpful in improving their work performance. Performance evaluation should involve monitoring of performance, providing feedback, coaching, and promoting development. Although, majority of HEWs submit monthly progress report to DHMO, and receive feedback, still some HEWs do not submit monthly reports. Moreover, the regularity of reporting and feedback is an area for improvement as it varies in frequency and quantity among the regions. The integration of the performance report with other human resource management systems (such as promotions, transfers, disciplinary actions, in service training, compensation, merit-based reward) in order to promote development was poor. If the performance management system is not given value, HEWs will not find the system useful and will not have the commitment to provide high quality performance.

Working hours and allocation of time: It is highly encouraging that most HEWs are working beyond the normal working hours allocated for civil servants in the country, indicating great determination of the HEWs to effectively accomplish their duties and responsibilities. Moreover, on average, only 25% of their time was spent in the health post, which corresponds to the standard of time allocation of the HEP implementation strategy. Although, most of the service packages of the HEP have been practiced by most HEWs, there are areas of activities being less practiced by the HEWs. Nutrition, adolescent reproductive health and tuberculosis prevention and control are among the most neglected areas of activities by many HEWs.

Workload: Most HEWs considered the work load assigned to them as too much, indicating the need to concentrate on the main activities that are expected to bring changes on the well being of the community. It may be important to exempt HEWs from meetings that are not directly related to the HEP. While the national HEP implementation guideline sets for the support system that should exist between CHWs and community health promoters on the one hand and HEWs on the other hand, CHWs seem to be constantly involved in activities that would otherwise have been shared by volunteer promoters. On the other hand majority of HEWs also reported that the duties and responsibilities need more training than they have received.

Majority of HEWs reported that they enjoy performing vaccination services, family planning and construction of sanitary latrine. Moreover, they reported that they have adequate skills to provide vaccination services, family planning and health education services. These findings indicate that HEWs have adequate skill in specific health service packages and enjoy working on the same packages, rather than on HEP service packages that HEWs find difficulties in terms of skills, which include maternal and child health, adolescent reproductive health, and first aid.

## HEP and Community based health workers

Community Health Workers (CHWs): Majority of HEWs reported that there are community based health workers that are fully involved in the implementation of the HEP in their respective villages, and feel that CHWs are important for the success of HEP. On the other hand, majority of HEWs reported that CHWs have more acceptance than the HEWs in many areas. More HEWs in Oromia region, in particular, showed negative perception with CHWs with regard to attending monthly meetings and participation in the implementation of HEP, which could be the main reason for HEWs in Oromia region to feel that CHWs should be given financial incentives.

Volunteer Community Health Workers/Promoters (CHP): Majority of HEWs has formed and is work together with community health workers/promoters. The national HEP implementation guideline states that HEWs should form CHP by selecting and training among graduated model households for HEP to quickly scale up the HEP implementation. Accordingly over 80.2% of HEWs have formed volunteer CHWs/promoters since they have started working in their village. However, the number of currently active promoters varied within and between regions with some villages having very few promoters, thus, more effort is needed to ensure the formation of adequate number of promoters in all villages.

## HEP and the community

Utilization of HEP services by the community: It has been shown that HEWs are approached by the community for limited types of HEP services such as family planning, immunization, treatment of illnesses, and first aid. There is, thus, big concern on the relatively poor utilization of services such as delivery services, treatment of infections, and HIV counseling and testing. Lack of awareness, need for curative care, and slow pace on introducing HEP to the community and hence lower demand for the various services were reported to be the main reasons for not using or bypassing the HEWs by the community.

Model Household package services: Majority of HEWs have initiated model household package services in their village although there is variation among the study regions. Each HEW who initiated a model household package services visit an average of about 15 households per day which is in line with the national HEP implementation manual. However, one can see outliers on the number of households visited per HEW per day which reflects the need for standardization. This is because HEWs in Amhara, Oromia, and SNNP reported that they visit an average of 10, 60, and 41 households per day, respectively. However, the number of model household who were trained and graduated, taking into account the national HEP implementation guideline and the duration of services each HEW spent, is very low.

## Support and continuing education

Re-fresher training courses: Although, more than half of the HEWs have attended at least one refresher course in one year preceding the survey, some of the regions (Oromia and SNNP) had very low proportion of HEWs who have attended at least one refresher course in a year. Less than half of HEWs expressed satisfaction on the refresher trainings they have attended, which might be due to the content of the training, quality of training, and more importantly, due to lack of demand (need) by HEWs. There have been high demands for the refresher trainings on delivery service followed by other maternal and child health services.

Supervision: With the rapid expansion of HEP and increasing numbers of health posts in remote areas, supervision is crucial to link the health posts and the DHMO. It was encouraging to note that overall,

about two-thirds of HEWs were supervised in the three months preceding the survey; however, the supervision rates in Oromia and SNNP regions, in particular, were not at the required level. Only half of the HEWs in Oroma and SNNP regions were supervised in the three months preceding the survey. Moreover, among the HEWs who reported that they were supervised during the last three months, only half of the HEWs were supervised every month, and less than two-thirds were supervised regularly. The frequency and regularity of supervision was relatively better in Amhara than Oromia and SNNP regions. The ultimate purpose of supervision is to increase acceptance and use of services by improving quality of services. Thus, the programmatic implication of the lack of adequate and regular supervision, particularly on health personnel, includes poorly communicated, linked, and de-motivated HEWs, which may result in low utilization of services and decreased acceptance of HEP by the community.

Generally, the supervision methods employed lacked balanced perspective in the use of different methods of supervision and triangulating to address issues and support HEWs. Person-to-person discussions were the method of supervision employed by majority of supervisors. None of the sampled HEWs were supervised by observation method and HEP client perspective was rarely assessed. This could be due to poorly qualified DHMO supervisors and lack of involvement of health center/hospital staff in the supervision that could otherwise see things from a different perspective. It could also be due to lack of standard supervisor guidelines and checklists. The study also found that among those supervised almost all sampled HEWs received feedback and guidance on the technical aspects of services from their supervisors, and their supervisors encourage them to work as a team and make them feel that they are valued, which can contribute in the provision of high-quality health care.

The sampled HEWs suggested spontaneously their expectations from supervisors to enable them learn new things, get good advice and support, to correct and improve their skills, motivation, and share experience. One of the roles of supervision as performance improvement tool is to help the HEWs manage problems more effectively, and provide re-assurance and emotional support. Such supervision approach encourages improvements in the procedures, personal interactions, and management of the HEP by HEWs leading to improved services.

The overall satisfaction with supervision among supervised HEWs was high across the study regions. However, considering the rate and scope of supervision reported in this study, there is a missed opportunity to minimize the effects of inadequately trained and qualified HEWs, and poor communication between the health system tiers on the implementation of HEP and the delivery of HEP services and activities.

Information and communications: The study found that supervisors and refresher courses are the primary sources of information about new developments in the health sector for the majority of sampled HEWs. In particular, regular and frequent supervision could contribute to creation of well informed and motivated HEWs. Similarly, well planned and demand based refresher courses, in addition to creating skills, will be important in creating an atmosphere for informing HEWs about new developments and interaction with other HEWs.

### Relationship with relevant organizations/institutions

Kebele Cabinet: Overall, only about quarter of the sampled HEWs, mainly from Amhara and Oromia, reported that they were members of local committee or Kebele Cabinet. The FMOH Manual on implementation of HEP recommends that one of the HEWs should be a member of the Kebele Cabinet to create the right environment for Kebele level stakeholder to assist HEWs in their HEP responsibilities.

DHMO: HEWs showed a positive perception about the support they receive from DHMOs. Majority of HEWs reported that the DHMO provides the opportunity to improve their professional knowledge and skills; communicates information; and are concerned with accomplishment. Overall, about a third of HEWs, mainly from SNNP, reported that there were NGOs working on health in their respective villages. All HEWs who work in these villages participate in the activities of the NGOs, but a third of them reported that their involvement strains their HEP work schedule.

It has been also observed that most HEWs have good relationships with government institutions working on health and other sectors. Majority of HEWs reported that they have good relationships with DHMO, village cabinet, local community, health center staff, and agriculture workers. In contrast, significant number of HEWs expressed that they have bad relationships with NGOs working in the villages.

### HEWs' Viewpoints on Hypothetical deployment of nurses in health posts

A hypothetical question for the views of HEWs on the assignment of a nurse at the health post to work with them revealed some positive and negative perspectives. The commonly expressed positive viewpoints were that the curative service would improve, the technical skills of HEWs would be strengthened, and HEP in general would be strengthened. The commonly expressed negative viewpoints were that it would reduce the acceptance of HEWs by the community, and it would weaken the preventive and promotive services of HEP.

### Challenges and constraints of HEP

Challenges: HEWs identified a number of constraints grouped into technical, social, organizational, and motivation factors that affect their performance in the implementation of HEP. Among the technical constraints identified by HEWs, 1) irregular supply of vaccines & lack of storage and carriage facility for vaccines, 2) irregular/no supply of drugs, 3) lack of adequate skill, and 4) no supervision were on top of the list. Because of the technical constraints, majority of HEWs feel that between 20-50% of their professional inputs were not utilized. These have programmatic implications in terms of scaling-up coverage and bringing impact through quality HEP services.

The most commonly stated social obstacles were poor road networks, working in remote areas, poor relation with community, poor communication system, and cultural values of the community. Moreover, organizational factors identified by majority of HEWs include lack of refresher courses, mobility problem, too much meetings, no promotion, and shortage of budget. About 43.2% of HEWs feel that their efforts are not productive because of the organizational factors over which they have no control. About a third of the HEWs, majority from Amhara region, expressed some specific grievance that affects their motivation. The factors that affect their motivation and impede their performance were uncomfortable working place, mistaken information about HEWs, low acceptance of HEWs by community, no opportunity for upgrade and training, and poor relationship with kebele cabinet.

Measures to improve quality of services: Measures suggested by HEWs to address some of the major constraints and improve the provision of quality HEP services in order of priority were the following: fulfill drugs, necessary equipments and other facilities as per the standard, refresher training for different health packages, work cooperatively with kebele cabinet and DHMO, and provision of clean water, electricity, telephone, and housing. The measures suggested by HEWs thought to improve both motivation and quality of services were upgrading their skills and re-fresher course.

## 1.16 RECOMMENDATIONS

HEWs form an invaluable body of skilled human resources; and as the frontline health workforce in the Ethiopian health system, they are providing essential PHC services across the country. The following recommendations, which are based on the assessment of HEWs perception, satisfaction, execution of HEP activities, are being made with the aim to strengthen the role of HEWs in HEP implementation:

### Living and working conditions of HEWs

- There should be uniformity in the provision of housing for HEWs, and all HEWs should be able to get housing for free preferably inside the health post as this could have significant impact on the day to day activities of the program. This should be the responsibility of the Kebele Cabinet along with the community.
- The variation in monthly salary within and between regions should be standardized, and comparable with employees of other government sectors with similar educational background. Moreover, alternative mechanisms should be devised to limit travel to district towns to collect salary.
- The considerable time spent on walking long distances in or outside of the village calls for exploring appropriate means of transportation. HEWs have suggested the best means of transportation such as motorcycles within the village, and between the village and district. It is therefore, important to identify potential donors who may have interest to support transportation for HEP in Ethiopia. Moreover, a coordinated delivery of various supplies such as drugs and vaccines to the health posts should be considered to reduce the frequent travel to DHMO.
- To improve motivation of HEWs, there should be a system to provide rewards and incentives such as skill development, career development and financial incentives, and access to basic facilities. The working environment should be improved. Advocacy work should also be strengthened to correct mistaken information about HEWs by the community and improve their acceptance. Supervision is critical in improving motivation, but should be undertake by well trained supervisors.

### Execution of HEP activities

- A functioning performance management system, which includes planning, performing and reviewing, should be in place. Each HEW should have result based plan of work developed with participation of all stakeholders. Planning should involve all key stakeholders to reach consensus about performance goals and how the performance will be tracked. It is also critical to educate the community about the assigned roles and responsibilities of HEWs.
- A diverse source of data should be considered to undertake the performance reviews. A strict follow up by the DHMO is required to receive monthly reports to monitor and review activities of HEP and provide regular feedback, which should be linked with promoting development.
- There is a need to properly standardize the allocation of time and use for the various activities of the HEP with emphasis on priority areas. Moreover, it is important to underline the relevance of all HEP services, in particular, the services being less practiced by HEWs such as nutrition, adolescent reproductive health and tuberculosis prevention and control. However, it should be supported by refresher training programs focusing on such services.

- Since most HEWs considered the workload as too much, immediate measures such as exempting them from meetings that are not directly related to HEP should be considered. Moreover, strengthening the support system through CHWs and community health promoters to share some of the responsibilities would relieve the workload of HEWs. More importantly, when annual plans are developed for HEWs, they should be practical to achieve and not over burden HEWs.
- HEWs feel that their duties and responsibilities need more training than they have received. It is, therefore, important to concentrate on further trainings to fill the gap in important areas of the HEP packages, and in areas where most HEWs lack adequate skills such as on maternal and child health, adolescent and reproductive health, and first aid.

### HEP and Community based health workers (CHWs)

- It is important to further work and fully involve the CHWs in the implementation of the HEP, and improve the reported poor relationships of HEWs and CHWs. Strategies and mechanisms have to be designed to increase the acceptance of the HEWs by the community at least to the level of the CHWs.
- More efforts are needed to ensure the formation of adequate number of promoters in all villages.

### HEP and the community

- The use of only limited types of HEP services by the community is not acceptable, and this trend should change and include services that are poorly utilized such as delivery services, treatment of infections, and HIV counseling and testing. As identified by HEWs, this can be done by creating awareness, and strengthening referral system to ensure the need for curative care is fulfilled.
- There is a need for all HEWs to initiate training of model households, and improve the pace to graduate adequate number of model households in relation to the duration of HEP implementation. There is also a need for standardization of the activities and time use for model household visit to address the variation among the regions.

### Support and continuing education

- There is a need to make sure all HEWs have the same chance of attending refresher trainings, because while some HEWs have attended at least two training sessions, about half of the HEWs did not have a chance to attend one refresher course in the one year preceding the survey.
- Comparatively, Oromia and SNNP regions should be able to improve the opportunity for refresher trainings.
- Refresher trainings should be planned around maternal and child health services, particularly on delivery services as indicated by HEWs.
- Regional health bureaus as well as DHMOs should ensure that all HEWs are supervised regularly. This is particularly important for Oromia and SNNP regions because the supervision rate, the frequency of supervision and regularity of supervision were very low in the two regions.
- The measure taken recently by the government of training and deployment of over 2000 nurse HEP supervisors should be scaled-up until adequate numbers of supervisors are in place. Supervisors should be trained on supervision methods and techniques, and equipped with standard supervisor guidelines and checklists. There is also a need to involve skilled personnel (such as midwifes) from

nearest health facilities in supervision activities to improve their skills through technical guidance, which will also serve to link HEP with referral health facilities.

- It is also important to consider direct supervision methods while the HEWs are doing their actual work either at the Health Post or village level (observation method), which is critical in the development of HEWs' skills.
- Supervision sessions and refresher courses should be systematically used as an opportunity to inform HEWs about new developments in the health sector and share information from collogues.

### Relationship with relevant organizations/institutions

- Although, the data on time use diary survey showed that HEWs spend significant amount of their time in attending meetings, membership of HEWs in Kebele Cabinet should be encouraged in all villages with some adjustment to the amount of time spent on meetings. For the benefit of the program it is important to consider that HEWs mainly attend meetings that have direct relations to the HEP in the respective villages.
- NGOs working on health sector are expected to help improve the HEP, and maintain good relationships with HEWs. It is, therefore, important to investigate what makes the HEWs unhappy on the NGOs operating in the villages to look for directions and the modalities on how NGOs can best support the HEP.
- It is important to identify the NGO's activities that may not be directly related to HEP and limit the involvement of HEWs in such activities. The DHMO should be able to make the necessary follow up in their respective areas to avoid any activity of the NGOs that may potentially affect HEP.

### Challenges and constraints of HEP

- Prioritizing and addressing the major constraints on technical, social, organizational, and motivation issues should be undertaken by the responsible bodies, which includes the community, community leaders, DHMO, and regional health Bureaus. More importantly, HEWs themselves have suggested the priority areas that need immediate solutions.
- Since people closest to the work are likely to know the most about solving challenges in their areas, HEWs should be involved in decisions made to solve the challenges. An added benefit is that the motivation of HEWs will improve if they have some involvement and control over their work environment and over their own destinies.

# HEWS TIME USE (DIARY METHOD)

## 1.17 BACKGROUND AND METHOD

The specific objectives of the time uses survey were: 1) To determine the number of working days of HEWs per week; 2) To estimate the proportion of HEWs time spent at the health post and at community level; and 3) To estimate the time use (allocation) of HEWs to each of the health service packages and other cross-cutting activities.

We have used both the "survey method" (interviewing) and the "diary method" to collect time use information from the same HEWs. The data collected through the survey method is presented in Chapter 3 of this report. The data on time use by diary method was collected from 63 HEWs, from Amhara (18), Oromia (24), and SNNP (21) regions. It has been suggested that the time diary method produces more accurate and reliable measures of time use than the survey approach. In this section of the report we present the result of the diary method. HEWs carried a structured diary format to record daily the way they allocate their time for 14 days in a continuous sequence of "slots".

***Time use and type of HEWs activity:*** The time use variables included in the diary survey method cover all the major categories of daily activities of HEWs. The HEWs activities were grouped into 7 major categories: 1) family health; 2) hygiene and environmental sanitation; 3) disease prevention and control; 4) information, education and communication; 5) support, supervision and continuing education; 6) travel within villages and to district offices; and 7) personal activities and absences.

Family health included family planning, vaccination services, maternal and child health, nutrition, adolescent reproductive health, and delivery. Hygiene and environmental sanitation included construction and maintenance of sanitary latrines, solid and liquid waste management, personal hygiene, water supply safety measures, food hygiene and safety measures, building and maintaining healthful house, control of insects, rodents and other biting species, and healthful housing construction. Disease prevention and control included malaria prevention and control, HIV/AIDS prevention and control, tuberculosis prevention and control, and disease outbreak investigation and control, and first aid. Information, education and communication included health education and communication, registration of vital statistics, plan and report preparation, campaigns. Support, supervision and continuing education included discussion with supervisors, discussion with visitors, kebele cabinet meeting, review meeting at DHMO, review meeting with NGOs, other stakeholders, meeting with CHWs, supervising CHWs, attending meeting, and refresher training.

***Time use and place:*** HEWs record the starting and ending time for each activity and the place where they implement each activity. The alternative places for implementing the HEP activities include at the health post level, at the community level, at the households level, and anywhere outside the village. The data were used to estimate the average time for each HEP intervention activity, and the proportion of HEWs' time allocated to each activity. These measurements provide useful information about how HEWs allocate their time to different HEP activities, and how they allocate their time between the health post and community and household level activities.

## 1.18 TIME USE

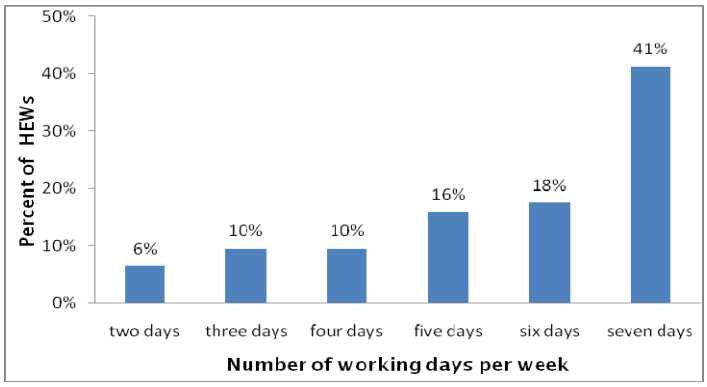
### 1.18.1 WORKING DAYS IN A WEEK

Based on the diaries filled by each of the HEW, the number of days that the HEW spent working was tabulated. About three-quarters (74.7%) of HEWs worked at least 5 days a week – 41.3% of HEWs worked every day every week, 17.5% of HEWs worked 6 days a week, and 15.9% of HEWs worked 5 days a week. Another 9.5% of HEWs worked 4 days in a week, 9.5% of HEWs and 6.4% of HEWs worked only three and two days a week, respectively. The proportion of HEWs who worked for at least 5 days varied among the regions (Table 4.1). More HEWs worked at least 5 days in SNNP (85.7%) than in Oromia (70.8%) and Amhara (66.8%).

**Table 0.1: Percent distribution of HEWs by number of working days per week by region**

| Number of working days | Percent of HEWs by regions | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Amhara | | Oromia | | SNNP | | Total | |
| | No. | % | No. | % | No. | % | No. | % |
| 2 | 2 | 11.1 | 2 | 8.3 | 0 | 0.0 | 4 | 6.4 |
| **3** | 2 | 11.1 | 1 | 4.2 | 3 | 14.3 | 6 | 9.5 |
| **4** | 2 | 11.1 | 4 | 16.7 | 0 | 0.0 | 7 | 9.5 |
| **5** | 1 | 5.6 | 5 | 20.8 | 4 | 19.0 | 10 | 15.9 |
| **6** | 1 | 5.6 | 4 | 16.7 | 6 | 28.6 | 11 | 17.5 |
| **7** | 10 | 55.6 | 8 | 33.3 | 8 | 38.1 | 26 | 41.3 |
| **Total** | **18** | **100** | **24** | **100** | **21** | **100** | **63** | **100** |

**Figure 0.1: Percent distribution of HEWs by number of working days per week**




### 1.18.2 TIME SPENT ON HEP ACTIVITIES AND PLACE SPENT

Unlike other government employees, HEWs work during the regular working hours of government employees (8:30-12:30 and 1:30-5:30 from Monday to Friday) and non-working hours of government employees. The non-working hours includes before or after the working hours of Monday to Friday, and any time during the weekends. The time that HEWs spent working in any activities of the HEP during the government working hours is compiled as “working hours” and the time spent on HEP activities during the non-government working hours is compiled as “non-working hours”. The average number (percent) of hours spent at the different working places were estimated separately for the working hours and non-working hours, as well as “total time” HEWs (working hours + non-working hours) per HEW.

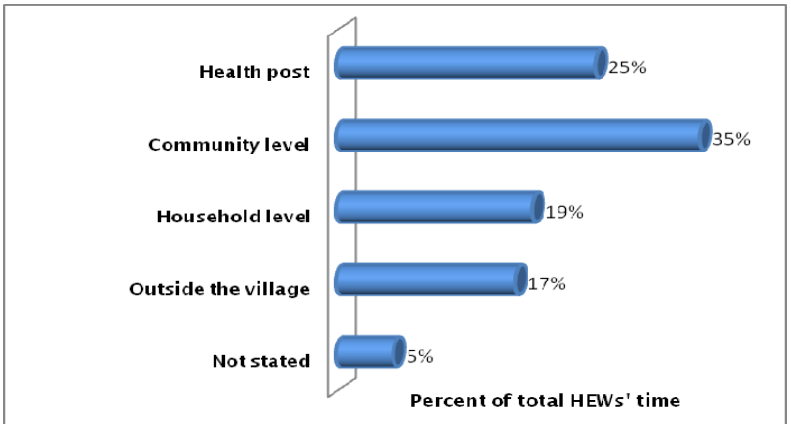
*Total time spent on HEP activities*: Each HEW worked an average of 58 hours on HEP activities during the working hours over two weeks survey period. Each HEW also worked an average of additional 32.4 hours on HEP activities during the non-working hours over the two weeks survey period. On average, each HEW spent a total of 90.4 hours over two weeks period working on HEP activities. The total average number of hours over the two weeks period that HEWs spent working on HEP varied among the regions. On average, HEWs in Amhara, Oromia and SNNP spent a total of 85.8 hours, 79.9 hours, and 106.2 hours, respectively.

*Time spent by working place*: Overall, HEWs spent 24.6% of their total time at the health post; 34.5% of their time at the community level; 18.6% of their time at household level; and 17.4% of their time outside the village. The pattern of allocating their time among the different places was generally similar during the working and non-working hours. The minor difference was in the time they spent at household level, where they spent more of the non-working hours (24.7%) than the working hours (15.2%) at household level.

**Table 0.2: Percent distribution of HEWs' time by place and by working and non-working hrs**

| | Percent of HEWs' time | | | | | |
|---|---|---|---|---|---|---|
| | Working hrs | | Non-working hrs | | Total | |
| **Place** | **Hours** | **%** | **Hours** | **%** | **Hours** | **%** |
| Health post | 14.3 | 24.7 | 7.9 | 24.3 | 22.2 | 24.6 |
| Community level | 20.4 | 35.2 | 10.8 | 33.4 | 31.2 | 34.5 |
| Household level | 8.8 | 15.2 | 8.0 | 24.7 | 16.8 | 18.6 |
| Outside the village | 10.7 | 18.4 | 4.6 | 14.3 | 15.3 | 17.0 |
| Not stated | 3.8 | 6.5 | 1.1 | 3.3 | 4.9 | 5.4 |
| **TOTAL** | **58.0** | **100** | **32.4** | **100** | **90.3** | **100** |

**Figure 0.2: Percent distribution of total HEWs' time spent in different places**




*Time spent by working place by region*: Although the general pattern of time spent at different places was similar between the regions, there were major differences on the proportion of time spent (table 4.3). The proportion of time spent at the health post was 20%, 25.1% and 27.3% in Amhara, Oromia, and SNNP regions, respectively. The proportion of time spent at the community or at household levels was 56.8%, 46.5% and 56.2% in Amhara, Oromia, and SNNP regions, respectively. HEWs in Oromia region spent about a quarter (27.2%) of their time outside the village, while it was 19.1% and only 6.7% of HEWs' time in Amhara and SNNP regions, respectively.

**Table 0.3: Percent distribution of total HEWs' time spent by place and region**

| | Percent of total HEWs' time by region | | | | | |
|---|---|---|---|---|---|---|
| | Amhara | | Oromia | | SNNP | |
| **Place** | **Hours (n=18)** | **%** | **Hours (n=24)** | **%** | **Hours (n=21)** | **%** |
| Health post | 17.1 | 20.0 | 20.1 | 25.1 | 29.0 | 27.3 |
| Community level | 23.7 | 27.6 | 26.2 | 32.8 | 43.3 | 40.8 |
| Household level | 25.0 | 29.2 | 10.9 | 13.7 | 16.4 | 15.4 |
| Outside the village | 16.4 | 19.1 | 21.7 | 27.2 | 7.1 | 6.7 |
| Not stated | 3.5 | 4.1 | 0.9 | 1.2 | 10.5 | 9.9 |
| **TOTAL** | **85.8** | **100** | **79.9** | **100** | **106.2** | **100** |

### 1.18.3 TIME ALLOCATION TO HEP SERVICES AND OTHER ACTIVITIES OF HEWS

*Time allocation during working and non-working hours:* The time allocation by HEWs to the different health programs and other major activities is presented in Figure 4.3. This information comprises time spent during working hours and non-working hours. Each HEW spent, on average, a total of 16.4 hours (10.6 during working hours and 5.8 hours during non-working hours) on family health program over two weeks period. Each HEW spent similar amount of time (total of 15.4 hours) on hygiene and environmental sanitation, about 9 hours on disease prevention and control. Support, supervision and continuing education took about 19 hours of HEWs' total time over two weeks, followed by travel within the village and district offices, which took up 14.4 hours of their time. The share of HEWs' time spent on information, education and communication (11.6 hours), and personal activities (4.2 hours) is also presented in figure 4.3. A detailed data showing the time use during working hours and non-working hours is presented in table 4.4.

**Figure 0.3: distribution of HEWs' time spent (in hours) over two weeks by major HEP programs**

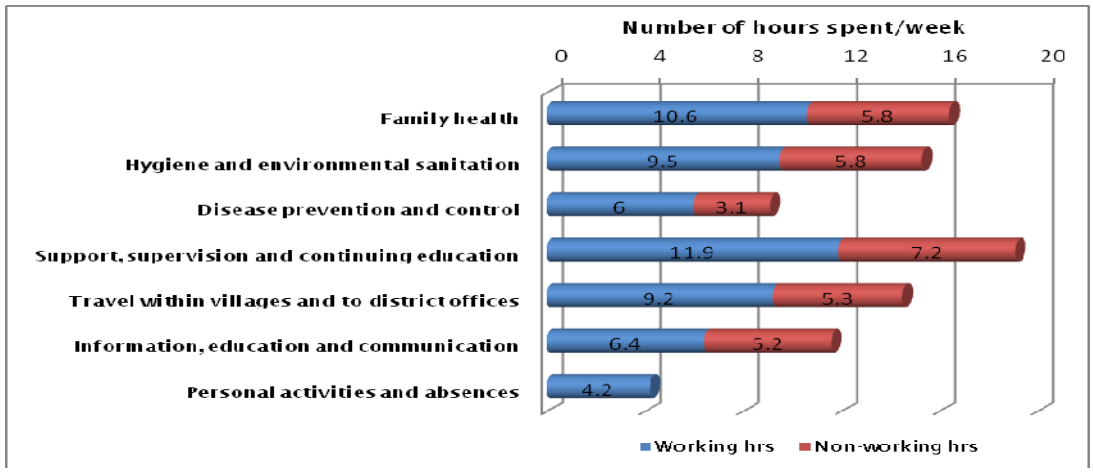


**Table 0.4: Distribution of HEWs' time spent (by government working and non-working hrs) by HEP service packages, supportive and personal activities over two weeks**

| Activity | Average and % of HEWs time (hrs) spent | | | | | |
|---|---|---|---|---|---|---|
| | Working | | Non-working | | Total hours | |
| | hrs | % | hrs | % | hrs | % |
| **Family health** | **10.6** | **18.2** | **5.8** | **18.0** | **16.4** | **18.1** |
| Family planning | 3.5 | 6.0 | 1.7 | 5.4 | 5.2 | 5.8 |
| Vaccination services | 3.2 | 5.5 | 1.5 | 4.6 | 4.7 | 5.2 |
| Maternal and child health | 2.5 | 4.3 | 1.5 | 4.6 | 4.0 | 4.4 |
| Nutrition | 1.0 | 1.7 | 0.8 | 2.5 | 1.8 | 2.0 |
| Adolescent reproductive health | 0.4 | 0.7 | 0.3 | 1.0 | 0.7 | 0.8 |
| **Hygiene and environmental sanitation** | **9.5** | **16.4** | **5.8** | **18.0** | **15.4** | **17.0** |
| Construction of sanitary latrines | 2.4 | 4.2 | 1.2 | 3.7 | 3.6 | 4.0 |
| Solid and liquid waste management | 1.6 | 2.7 | 0.8 | 2.3 | 2.3 | 2.6 |
| Personal hygiene | 1.2 | 2.1 | 1.0 | 3.2 | 2.3 | 2.5 |
| Food hygiene (food safety measures) | 1.1 | 1.9 | 0.7 | 2.2 | 1.8 | 2.0 |
| Water supply safety measures | 1.2 | 2.1 | 0.5 | 1.6 | 1.7 | 1.9 |
| Building and maintaining healthful house | 0.7 | 1.2 | 0.7 | 2.2 | 1.4 | 1.5 |
| Control of insects, rodents and biting species | 0.7 | 1.2 | 0.5 | 1.4 | 1.2 | 1.3 |
| Healthful housing construction | 0.7 | 1.1 | 0.5 | 1.5 | 1.1 | 1.3 |
| **Disease prevention and control** | **6.0** | **10.3** | **3.1** | **9.7** | **9.1** | **10.1** |
| First aid | 1.7 | 2.9 | 0.9 | 2.8 | 2.6 | 2.8 |
| Malaria prevention and control | 1.8 | 3.1 | 0.6 | 2.0 | 2.4 | 2.7 |
| HIV/AIDs prevention and control | 1.2 | 2.0 | 0.8 | 2.6 | 2.0 | 2.2 |
| Tuberculosis prevention and control | 0.6 | 1.1 | 0.6 | 1.8 | 1.2 | 1.3 |
| Disease outbreak investigation and control | 0.8 | 1.3 | 0.2 | 0.6 | 1.0 | 1.1 |
| **Support, supervision and continuing education** | **11.9** | **20.6** | **7.2** | **22.2** | **19.1** | **21.2** |
| Kebele cabinet and other meetings | 5.9 | 10.1 | 3.1 | 9.5 | 8.9 | 9.9 |
| Review meeting with DHMO, NGOs, & stakeholders | 1.9 | 3.4 | 0.8 | 2.5 | 2.8 | 3.0 |
| Refresher training | 1.5 | 2.6 | 1.1 | 3.3 | 2.6 | 2.9 |
| Supervising and meeting CHWs | 1.2 | 2.1 | 1.3 | 4.0 | 2.5 | 2.7 |
| Discussion with supervisors and visitors | 1.5 | 2.5 | 0.9 | 2.9 | 2.4 | 2.6 |
| **Travel within villages and to district offices** | **9.2** | **15.8** | **5.3** | **16.2** | **14.4** | **15.9** |
| Traveling from house to house | 6.3 | 10.9 | 2.8 | 8.6 | 9.1 | 10.1 |
| Collecting drug | 1.1 | 2.0 | 0.7 | 2.2 | 1.8 | 2.0 |
| Collecting salary and per-diem at DHMO | 0.8 | 1.5 | 0.8 | 2.7 | 1.8 | 1.9 |
| Submitting reports | 0.8 | 1.5 | 0.9 | 2.8 | 1.7 | 1.9 |
| **Information, education and communication** | **6.4** | **11.1** | **5.2** | **15.9** | **11.6** | **12.8** |
| Campaigns | 2.6 | 4.4 | 2.9 | 9.1 | 5.5 | 6.1 |
| Plan and report preparation | 1.8 | 3.1 | 0.8 | 2.6 | 2.7 | 2.9 |
| Health education and communication | 1.6 | 2.7 | 0.8 | 2.6 | 2.4 | 2.6 |
| Registration of vital statistics | 0.5 | 0.9 | 0.5 | 1.7 | 1.0 | 1.1 |
| **Personal activities and absences** | **4.2** | **7.3** | **-** | **-** | **4.2** | **4.7** |
| Personal activities (market, lunch, coffee, etc) | 3.2 | 5.5 | - | - | 3.2 | 3.5 |
| Absence due to personal problem | 0.8 | 1.4 | - | - | 0.8 | 0.9 |
| Absence due to illness | 0.2 | 0.3 | - | - | 0.2 | 0.2 |
| Maternal leave | 0.1 | 0.2 | - | - | 0.1 | 0.1 |
| Not stated | 0.1 | 0.2 | | | 0.1 | 0.1 |
| Annual leave | 0.0 | 0.0 | - | - | 0.0 | 0.0 |
| **Total** | **58.0** | **100** | **32.4** | **100** | **90.3** | **100** |

*Total HEWs' time allocation pattern by region*: The proportion of total HEWs' time spent over the various major HEP programs is presented in figure 4.4. The proportion of HEWs' total time spent on family health; on travel within village and district; and personal activities was similar between the three regions. Major differences were seen on hygiene and environmental sanitation; disease prevention and control; support, supervision and continuing education; and information, education and communication. HEWs in SNNP spent higher proportion of their time (20%) on hygiene and environmental sanitation compared to Amhara (16%) and Oromia (14%). Similarly, HEWs in SNNP spent higher proportion of their time (15%) on disease prevention and control compared to Amhara (6%) and Oromia (8%). On other hand, HEWs in Oromia spent higher proportion of their time (28%) on support, supervision and continuing education (mainly on meetings) compared to Amhara (18%) and SNNP (18%). HEWs in Amhara region spent a very high proportion of their time (26%) on information, education and communication (mainly on campaigns) compared to Oromia (6%) and SNNP (10%). A detailed data is presented in table 4.5.

**Figure 0.4: Percent distribution of total HEWs' time (two weeks) spent on HEP activities by region**

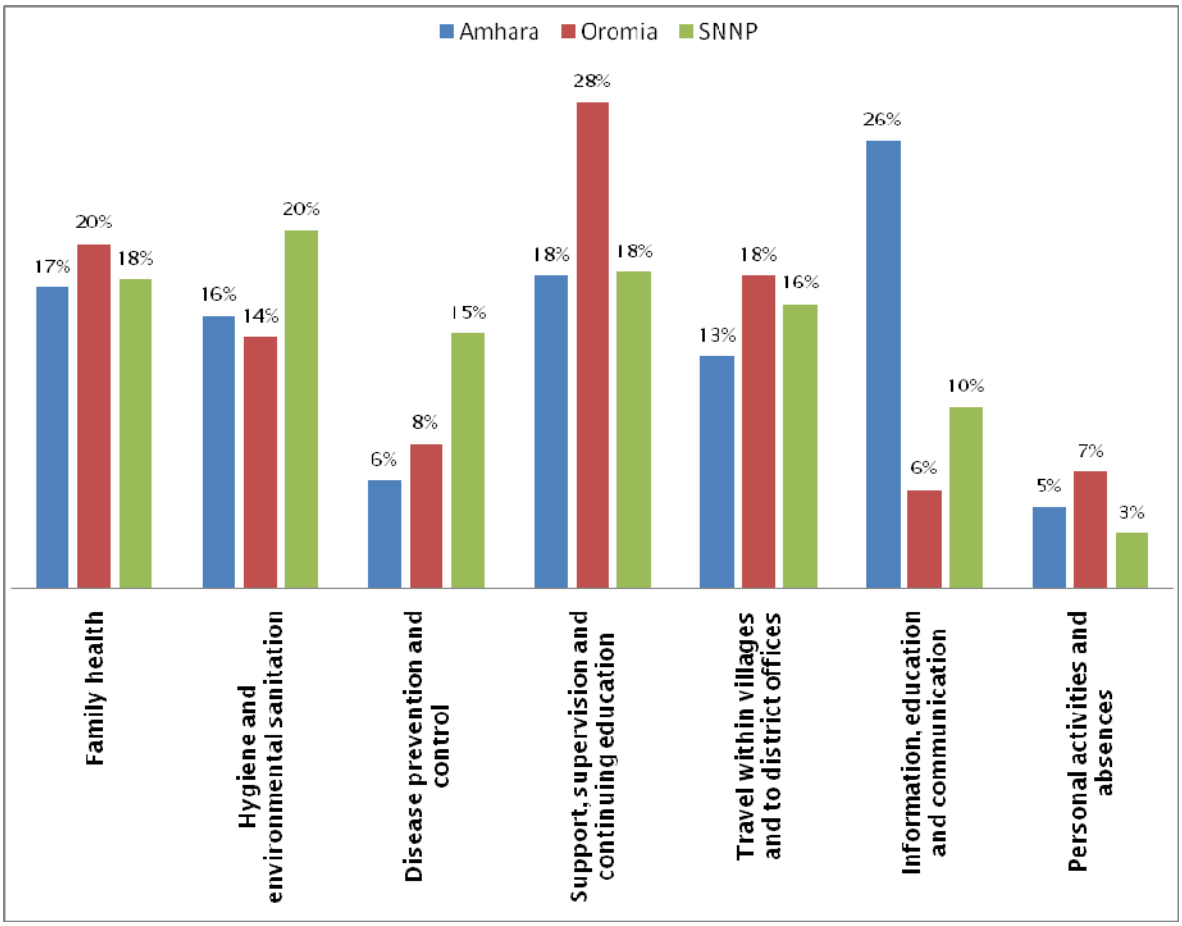


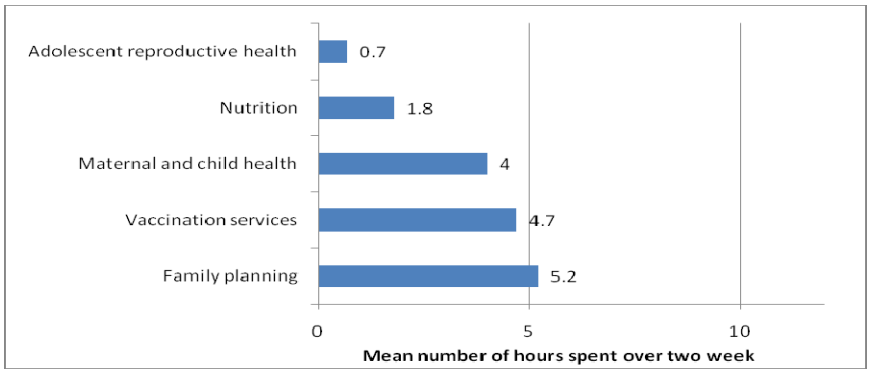
**Table 0.5: Percent distribution of total HEWs' time (2 weeks) spent on HEP services by region**

| HEP services and activity | Average and % of HEWs time (hrs) spent | | | | | |
|---|---|---|---|---|---|---|
| | Amhara (n=18) | | Oromia (n=24) | | SNNP (n=21) | |
| | Hours | % | Hours | % | Hours | % |
| **Family health** | **14.7** | **17.1** | **15.6** | **19.6** | **18.7** | **17.6** |
| Maternal and child health | 5.0 | 5.8 | 3.3 | 4.1 | 4.0 | 3.8 |
| Family planning | 3.9 | 4.5 | 6.0 | 7.5 | 5.6 | 5.3 |
| Adolescent reproductive health | 0.5 | 0.6 | 0.3 | 0.3 | 1.4 | 1.3 |
| Vaccination services | 2.8 | 3.2 | 5.5 | 6.9 | 5.4 | 5.1 |
| Nutrition | 2.6 | 3.0 | 0.6 | 0.8 | 2.4 | 2.2 |
| **Hygiene and environmental sanitation** | **13.3** | **15.5** | **11.4** | **14.3** | **21.6** | **20.4** |
| Building and maintaining healthful house | 2.5 | 2.9 | 0.6 | 0.7 | 1.3 | 1.3 |
| Construction of sanitary latrines | 2.4 | 2.7 | 4.3 | 5.4 | 4.0 | 3.7 |
| Solid and liquid waste management | 2.4 | 2.8 | 1.8 | 2.3 | 2.8 | 2.7 |
| Water supply safety measures | 2.2 | 2.5 | 0.8 | 1.0 | 2.3 | 2.2 |
| Food hygiene (food safety measures) | 1.9 | 2.3 | 1.0 | 1.3 | 2.5 | 2.4 |
| Control of insects, rodents and biting species | 0.4 | 0.5 | 0.5 | 0.6 | 2.6 | 2.4 |
| Personal hygiene | 1.3 | 1.5 | 2.0 | 2.5 | 3.5 | 3.3 |
| Healthful housing construction | 0.3 | 0.3 | 0.5 | 0.6 | 2.6 | 2.5 |
| **HIV/AIDs, malaria and TB** | **5.3** | **6.1** | **6.6** | **8.2** | **15.4** | **14.5** |
| HIV/AIDs prevention and control | 1.2 | 1.4 | 2.0 | 2.5 | 2.7 | 2.5 |
| Tuberculosis prevention and control | 0.6 | 0.7 | 0.5 | 0.6 | 2.6 | 2.4 |
| Malaria prevention and control | 2.3 | 2.7 | 0.8 | 1.0 | 4.3 | 4.0 |
| First aid | 0.9 | 1.1 | 3.1 | 3.8 | 3.4 | 3.2 |
| Disease outbreak investigation and control | 0.2 | 0.2 | 0.3 | 0.3 | 2.4 | 2.3 |
| **Support, supervision and continuing education** | **15.2** | **17.8** | **22.1** | **27.7** | **19.1** | **18.0** |
| Kebele cabinet and other meetings | 1.6 | 1.8 | 9.3 | 19.1 | 8 | 7.5 |
| Review meeting with DHMO, NGOs and stakeholders | 6.2 | 7.3 | 0.8 | 0.9 | 2.0 | 1.9 |
| Refresher training | 3.3 | 3.8 | 3.0 | 3.7 | 1.6 | 1.5 |
| Supervising and meeting with CHWs | 2.1 | 2.4 | 1.8 | 2.3 | 3.6 | 3.4 |
| Discussion with supervisors and visitors | 2.0 | 2.3 | 1.3 | 1.7 | 4.0 | 3.7 |
| **Travel within villages and to district offices** | **11.3** | **13.2** | **14.2** | **17.8** | **17.2** | **16.2** |
| Traveling from house to house | 7.5 | 8.8 | 9.5 | 11.9 | 10.1 | 9.5 |
| Collecting drug | 1.9 | 2.2 | 1.7 | 2.1 | 1.9 | 1.8 |
| Submitting reports | 1.1 | 1.3 | 0.9 | 1.1 | 3.2 | 3.0 |
| Collecting salary and per-diem at DHMO | 0.8 | 1.0 | 2.1 | 2.7 | 2.1 | 1.9 |
| **Information, education and communication** | **21.9** | **25.5** | **4.4** | **5.6** | **10.9** | **10.3** |
| Health education and communication | 1.3 | 1.5 | 2.3 | 2.9 | 3.4 | 3.2 |
| Registration of vital statistics | 1.8 | 2.1 | 0.7 | 0.8 | 0.8 | 0.8 |
| Plan and report preparation | 2.7 | 3.2 | 0.9 | 1.2 | 4.5 | 4.3 |
| Campaigns | 16.1 | 18.7 | 0.5 | 0.6 | 2.2 | 2.1 |
| **Personal activities and absences** | **3.9** | **4.6** | **5.3** | **6.6** | **3.3** | **3.1** |
| Absence due to illness | 0.2 | 0.3 | 0.3 | 0.4 | 0.0 | 0.0 |
| Absence due to personal problem | 1.1 | 1.3 | 0.8 | 0.9 | 0.5 | 0.5 |
| Annual leave | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Maternal leave | 0.2 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 |
| Personal activities (market, lunch, coffee, etc) | 2.4 | 2.7 | 4.1 | 5.1 | 2.8 | 2.6 |
| Not stated | 0.2 | 0.3 | 0.2 | 0.2 | 0.0 | 0.0 |
| **Total** | **85.8** | **100** | **79.9** | **100** | **106.2** | **100** |

*Family Health:* As presented above, each HEW spent an average of 16.4 hours (18.1% of total working time) on all family health related activities over two weeks. The HEP services under family health include

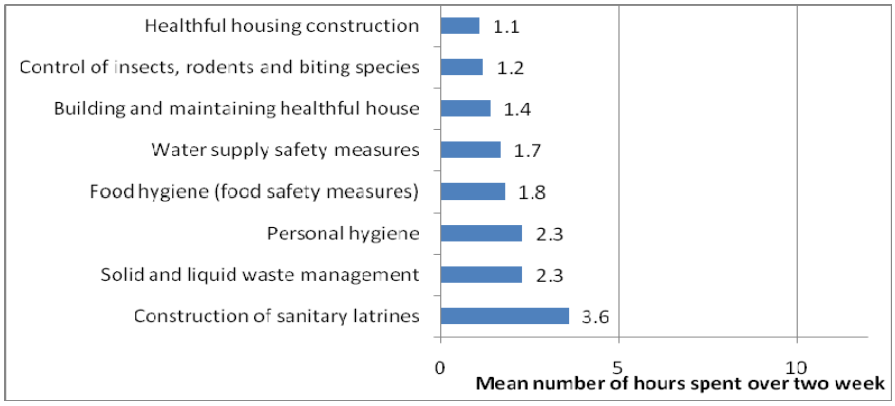
family planning, vaccination services, maternal and child health, nutrition, and adolescent reproductive health. The distribution of the total time spent on family health program (16.4 hours) among the health service packages is presented in figure 4.5. Majority of the time was spent on family planning (5.2 hrs), vaccination services (4.7 hrs), and maternal and child health (4 hrs). HEWs spent less than 1 hr of their time on adolescent reproductive health over two weeks period.

**Figure 0.5: Distribution of total HEWs' time (2 weeks) spent on family health activities**



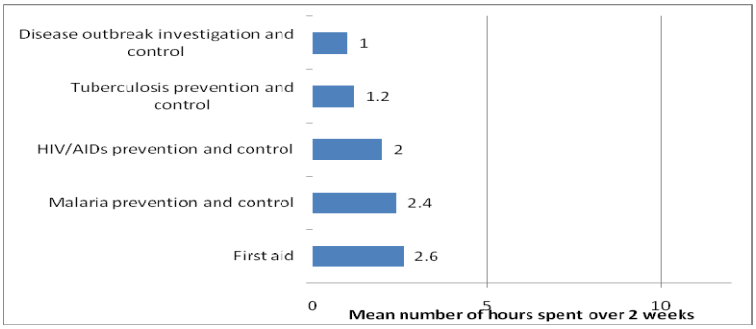

*Hygiene and environmental sanitation:* On average, 17% (15.4hrs) of the total time of HEWs over two weeks was spent on hygiene and environmental sanitation activities. The allocation of time to the different activities under hygiene and environmental sanitation in order of time spent were construction and maintenance of sanitary latrines (3.6hrs), solid and liquid waste management (2.3hrs), personal hygiene (2.3hrs%), food hygiene and safety measures (1.8hrs), water supply safety measures (1.7hrs), building and maintaining healthful house (1.4hrs), control of insects, rodents and other biting species (1.2hrs), and healthful housing construction (1.1hrs).

**Figure 0.6: Distribution of HEWs' time (2 weeks) spent on hygiene and environmental sanitation**



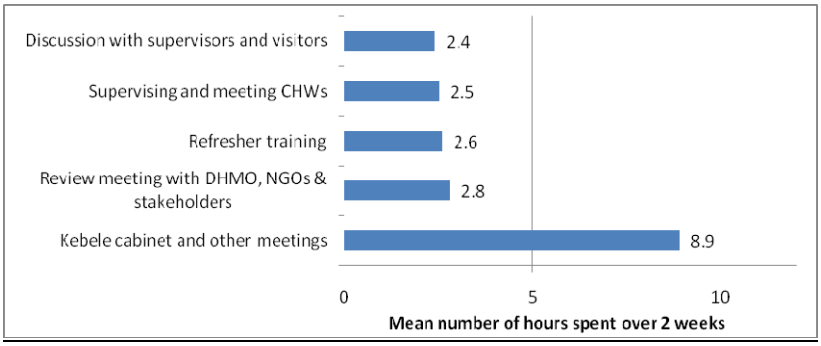

*Disease prevention and control:* Overall, HEWs spent a total of 9.1hrs on the various activities of disease prevention and control program over two weeks period. The activities included under disease prevention and control program were malaria prevention and control, HIV/AIDS prevention and control, tuberculosis prevention and control, and disease outbreak investigation and control, and first aid. The allocation of time to these activities in order of length of time spent were first aid (2.6hrs), malaria prevention and control (2.4hrs), HIV/AIDS prevention and control (2hrs), tuberculosis prevention and control (1.3hrs), and disease outbreak investigation and control (1hr).

**Figure 0.7: Distribution of HEWs' time (2 weeks) spent on disease prevention and control**



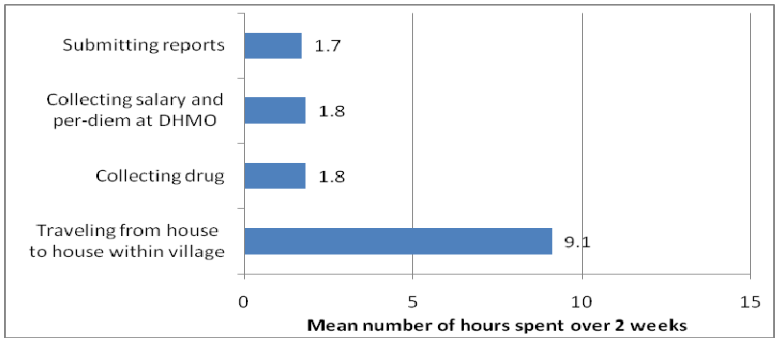

*Support, supervision and continuing education:* The overall average share HEWs' time for support, supervision and continuing education was 19.1hrs (21.2%) over two weeks period. Attending kebele cabinet and other meetings occupied 8.9hrs of HEWs' total time. On average, HEWs spent 2.8hrs in two weeks attending review meetings mainly with DHMO but also with NGOs and other stakeholders. Similar amount of time was spent on attending refresher courses (2.6hrs), supervising and monthly meetings with CHWs (2.5hrs), and discussing with supervisors and other visitors (2.4hrs).

**Figure 0.8: Distribution of HEWs' time (2 weeks) spent on support and continuing education**



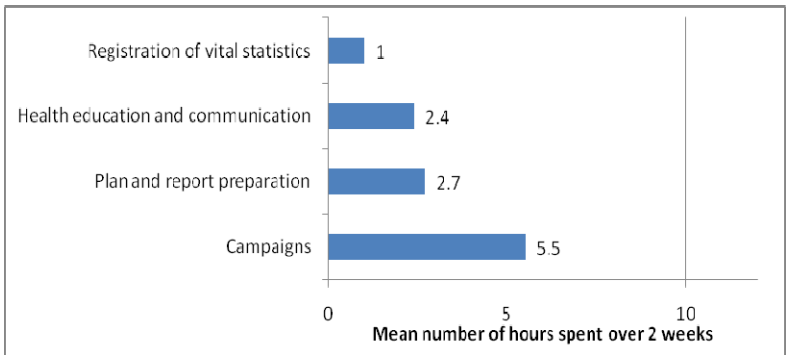

*Travel within village and district office:* Travelling within the village and district offices took up an average of 14.4hrs (15.9%) of HEWs' total working time over two weeks period. Among the activities included under this category, travelling from house to house occupied the majority (9.1hrs) of HEWs time. In fact, among the activities included in the time use survey, time spent on travelling from house to house was only second to attending kebele cabinet meetings. HEWs also spent an average of less than 2hrs of their time each over two weeks period on collecting drug (1.8hrs), collecting salary and per-diem (1.8hrs), and submitting reports (1.7hrs).

**Figure 0.9: Distribution of HEWs' time (2 weeks) spent on travelling within village and district**



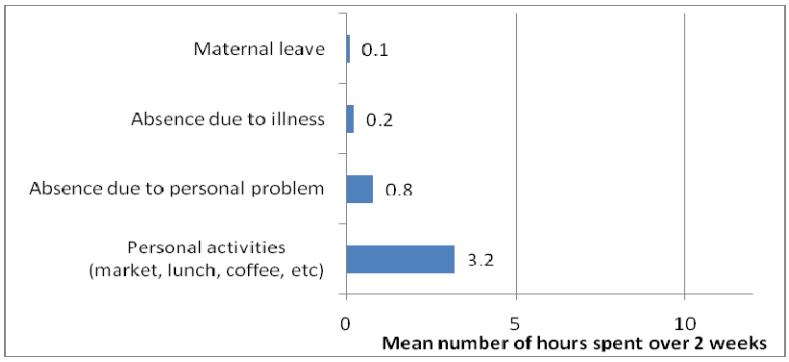
*Information, education and communication:* Under information, education and communication category, we have included various activities that couldn't be directly linked to the different health service packages. Overall, 11.6hrs of HEWs' total time over two weeks period was spent on these activities. Almost half of this time was spent on campaigns (5.5hrs). Another 5hrs were spent on plan and report preparation, and health education and communication.

**Figure 0.10: Distribution of HEWs' time (2 wks) spent on information, education and communication**




*Personal activities and absence:* The activities included under this category are personal activities and absence due to various reasons. These activities were only recorded during the working hours of the week. On average, each HEW spent about 4.2hrs (7.3%) of the working hours over the two weeks on personal activities or absence for personal reasons. Thus, out of the average time HEWs spent working during the working hours (58hrs), 4.2hrs was spent for personal activities. Detailed information on the various personal activities is presented in figure 4.11.

**Figure 0.11: Distribution of HEWs' time spent on personal activities**




## 1.19 CONCLUSIONS AND DISCUSSIONS

The data collected through the time use diary method was used to estimate the average time allocated for each HEP intervention, and the proportion of HEWs' time spent in the health post and household (community) levels.

### How many days per week do HEWs provide HEP services?

The time use diary indicated that three-quarters of HEWs worked at least five days a week, and a significant proportion of HEWs (41.3%) worked every day including the weekends, an indication of high determination of the HEWs to effectively implement the HEP in the respective villages. However, about a quarter of HEWs worked between 2-4 days per week. This is based on the assumption that if they have

worked they would have filled the time use diary form, but it is also likely that while they have been working on daily basis, they might have forgotten to fill the diary form. However, it is also possible that they have only worked only for 2-4 days per week.

### For how long (in hours) and from where do HEWs provide HEP services?

Although HEWs spent only 58hrs working on HEP activities during the official government working hours of two week period (as opposed to expected government employee working hours of 80hrs over two weeks), they have compensated it by working additional 32.4hrs outside the government working hours (including weekends). Thus, the average total time each HEW spent on HEP activities over two week period was 90.4 hours. Using the time outside the government working hours is a good adjustment so that HEWs can find household members in the evening and over the weekends. HEWs in SNNP work more hours (106.2 hours) than HEWs in Amhara (85.8hrs) and Oromia (79.9hrs) regions.

Overall, HEWs spent 24.6% of their total time at the health post, which is equivalent to the recommended FMOH standard of 25%. Over half of their time was spent with the community (34.5% doing community level work and 18.6% doing household visits). The proportion of time they spent on household and community level activity is low compared to the FMOH standard of 75%. This is due to the fact that HEWs are spending a significant amount of their time (17.4%) outside the village, and this is even more in Oromia region where about 27% of the time was spent outside of the village. This seems to be high and can affect the day to day activities of the HEP, and the regions need to consider and make adjustments.

### Time allocation to major HEP programs and cross-cutting areas

The time allocation by HEWs over two week period to the major health programs was as follows: 16.4hrs on family health program; 15.4hrs on hygiene and environmental sanitation; 9hrs on disease prevention and control. The overall share of time for the 16 HEP service packages over the two week period was 40hrs (20hrs/week). The allocation to the cross-cutting programs was as follows: 19hrs on support, supervision and continuing education; 14.4hrs on travel within the village and district offices; 11.6hrs on planning, reporting, and communication; and 4.2hrs on personal activities. Support, supervision and continuing education mainly that of cabinet meetings have taken the highest share of time (average 19hrs over two weeks, but, as high as 22hrs in Oromia). This seems unnecessarily high and a portion of the time could have been used for the actual work of the HEP such as family health, hygiene and environmental sanitation and disease prevention and control. The pattern of time allocation for family health; travel; and personal activities was similar between the three regions.

Major regional differences in the pattern of time allocation were seen on hygiene and environmental sanitation; disease prevention and control; support, supervision and continuing education; and planning, reporting, and communication.

- HEWs in SNNP allocate more time to hygiene and environmental sanitation and disease prevention and control compared to HEWs in Amhara and Oromia regions. This seems to be a good trend.
- HEWs in Oromia spent more time on support, supervision and continuing education (mainly on meetings) compared to HEWs in Amhara and SNNP regions. This trend needs correction.
- HEWs in Amhara spent a very high proportion of their time (26%) on planning, reporting, and communication (mainly on campaigns) compared to Oromia and SNNP. Although, campaigns and

planning and reporting are important activities, spending a quarter of total HEWs' time on these activities is too much and needs to be corrected.

### Time allocation to HEP service packages and cross-cutting activities

Hygiene and environmental sanitation: HEWs spent relatively more time on construction and maintenance of sanitary latrines, solid and liquid waste management, and personal hygiene. HEWs spent relatively less time on food hygiene and safety measures, water supply safety measures, building and maintaining healthful house, control of insects, rodents and other biting species, and healthful housing construction.

*Family Health:* The focus has been on family planning and vaccinations services, followed by maternal and child health. HEWs did not spend enough time on adolescent reproductive health and nutrition.

Disease prevention and control: HEWs spent relatively more time on first aid and malaria prevention and control activities. HEWs spent relatively less time on HIV/AIDS prevention and control, tuberculosis prevention and control, and disease outbreak investigation and control.

Support, supervision and continuing education: The highest time was spent on this area. Attending kebele cabinet and other meetings was mainly responsible for taking the highest share.

Travel within village and to district: Although, the total time spent on travelling within the village and district offices took up an average of 14.4hrs of HEWs' time over two weeks, majority was used for travelling from house to house (9.1hrs). The remaining time was spent on travelling to district town to collect salary and drugs, and submit monthly reports.

Planning, reporting and communication: Half of the 11.6hrs spent on this area was spent on campaigns (5.5hrs), with plan and report preparation, and health education occupying the remaining time.

Personal activities: Time spent on personal activities was only registered during the governemnt working hours. About 4.2hrs was registered for personal hours, however, since HEWs are expected to work 80hrs over two weeks during the governement working hours, there were about 22hrs which were not accounted (only 58hrs were accounted for).

## 1.20 RECOMMENDATIONS

There is a need to develop a standardized time allocation manual to prevent allocation of unnecessarily more time to less important activities, and vise versa. However, it should take into account regional and local factors such as the level of the health problem. As indicated in the previous section (HEWs perception and satisfaction), the main factors for HEWs' behavior of time spending were demand from the community, level of health problem, skill of HEWs, etc. These are not acceptable reasons (except the level of the health problem) to determine time allocation patterns, because demand can be created, and HEWs can be trained to deal with demand and skill. Even the level of health problem is a dynamic issue, and can change over time. For example, if HEWs achieved 100% coverage and use of sanitary latrines, then they can use some of their time for other services. The following issues, which are based on the study, need adjustments, and should be considered in future development of standardized time allocation manuals.

- Close follow-up by Kebele cabinet, monitoring and regular supervision would ensure that HEWs work at least five days a week. .

### Where to spend time

- Working during the non-working hours (such as in the evening and weekends) should be encouraged, because it may be easier to meet household members during these time periods.
- There should be some adjustment to where HEWs are spending their time. The time spent outside the village should be cut down so that HEWs will have adequate time to work on HEP activities at the household and community level. This issue is particularly, critical for HEWs in Oromia region.

### Major program areas that need adjustment in time allocation – regional pattern

- More time should be allocated to the major HEP programs and within the major HEP programs, the trend should be to allocate more time to family health program.
- The time spent on attending cabinet meetings, particularly in Oromia, seems unnecessarily high and some portion of the time needs to be used for implementation of HEP interventions.
- The pattern of allocating more time to hygiene and environmental sanitation and disease prevention and control seen in SNNP should be encouraged, and the other regions should follow similar pattern but balancing with time allocated to family health.
- Although, campaigns and planning and reporting are important activities, the pattern of spending a quarter of total HEWs' time on these activities in Amhara region is too much and needs to be corrected.

### Specific HEP service packages and cross-cutting activities that need adjustment

- HEWs need to spend comparable time on food hygiene and safety measures, water supply safety measures, building and maintaining healthful house, control of insects, rodents and other biting species, and healthful housing construction, which were given less time.
- There should be a focus on maternal and child health services among the family health services. Moreover, nutrition and adolescent reproductive health should not be ignored and adequate time should be allocated.
- Additional time need to be allocated to HIV/AIDS prevention and control, tuberculosis prevention and control, and disease outbreak investigation and control, which were given relatively less time.
- The time spent on travelling from house to house within the village can't be addressed by devising standardized time allocation schedules, unless means of transportation that can reduce the time spent on walking is available. Temporarily, HEWs can visit a group of houses in one area in a day so that they don't walk long from house to house.
- The time spent travelling to district towns to collect salary and drugs, and to submit progress reports should be corrected. There are some options – 1) when HEWs travel to collect their monthly salary, they can take their progress report with them, and also request for drugs, which means an integrated once a month trip; 2) the second option is to deliver the necessary supplies including salary by district staff and collect progress report at the same time in an integrated manner.

# HEWS COMPETENCE

The HEWs competence survey was implemented in randomly selected health posts in Amhara, Oromia and SNNP regions. The specific objectives of the survey were 1) To collect information on knowledge and practice of selected HEP service packages among HEWs; and 2) To generate a baseline data on quality of HEP implementation by HEWs in the three regions, which could serve to determine the impact of future in-service training for HEWs. The HEP service packages included in the study were antenatal care, delivery services, neonatal care, immunization, child care and nutrition, malaria diagnosis and treatment, and family planning services. All the HEWs working in the selected health posts were included in this study. From the sample of 53 health posts, 80 HEWs were interviewed in the three regions – 35 (43.8%) from Amhara, 25 (31.3%) from Oromia, and 20 (25%) from SNNP regions.

## 1.21 ANTENATAL CARE

HEWs were trained on midwifery skills to provide care before, during and after pregnancy which influences maternal and child health. During antenatal care, HEWs are expected to take history and perform physical examination including weighing the mothers and examining the foetus, seek to identify risk factors in maternal and family history, and provide relevant health education. HEWs also provide tetanus toxoid, micronutrients and food supplementation. HEWs need to undertake at least four visits per pregnant woman, and ensure women have an individualized birth plan and prepare them for birth.

HEWs were asked to list the uses of antenatal care to assess their knowledge on the purpose of antenatal care. HEWs response in order of frequency were to promote safe delivery (68.8%), preparation for birth and preventing disease (67.5%), ensure women has an individualized birth plan (56.3%), detection of existing diseases and management of complications (40%), and breast feeding promotion (23.8%). One HEW (1.3%) responded “don’t know”. The same information by region is presented in table 5.1. On the other hand, the proportion of HEWs who mentioned at least the two key uses of antenatal care (namely ensure women has an individualized birth plan, and preparation for birth and preventing disease) was low (38.8%). The level of comprehensive knowledge on the uses of antenatal care was similar across the three regions – 40%, 40% and 35% in Amhara, Oromia and SNNP regions respectively.

**Table 0.1: Percent of HEWs who know the uses of antenatal care by region**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Use of antenatal care** | **Amhara** | **Oromia** | **SNNPR** | **Total** |
| Ensure woman has an individualized plan | 62.9 | 56.0 | 45.0 | 56.3 |
| Preparation for birth and preventing disease | 65.7 | 72.0 | 65.0 | 67.5 |
| Detection of diseases and management of complications | 34.3 | 40.0 | 50.0 | 40.0 |
| Promote safe delivery | 77.1 | 56.0 | 70.0 | 68.8 |
| Breast feeding promotion | 28.6 | 20.0 | 20. 0 | 23.8 |
| Others | 5.7 | 8.0 | 5.0 | 6.3 |
| Don’t know | 0 | 0 | 5.0 | 1.3 |
| Number of HEWs | 35 | 25 | 20 | 80 |

## 1.22 COMPLICATION DURING PREGNANCY

While ensuring women have individualized birth plans and preparing them for birth and preventing disease, HEWs are also expected to examine the pregnant women to identify risk factors, and provide

relevant health education. Moreover, when pregnant women come with complications, HEWs should be able to identify signs of the major complications of pregnancy such as vaginal bleeding, severe anemia, and severe malaria. Since such pregnancy related complications are not managed by HEWs, the only expectation from HEWS is identifications of the signs and making appropriate decisions – specifically immediate referral.

### 1.22.1 VAGINAL BLEEDING

In this study, HEWs were asked to list the signs they look for and what they do when a woman comes at 34 weeks of gestation with vaginal bleeding. The response of HEWs in order of frequency were to look for foetal presentation (47.5%), foetal heart rate (43.8%), signs of labor (41.3%), signs of anaemia (35%), signs of shock (23.8%), abdominal tenderness (15%), amount of external bleeding (15%), and whether the blood is clotting (12.5%). About 8.8% of HEWs did not know what signs to look for. The most important danger signs that should be looked for in a 34 weeks pregnant woman who presents with vaginal bleeding are abdominal tenderness, signs of shock and anemia, and amount of external bleeding. HEWs should be able to look for all these important danger signs, however, none of the HEWs were able to mention at least the four danger signs.

**Table 0.2: Percent of HEWs who know signs to look for in a pregnant woman with vaginal bleeding**

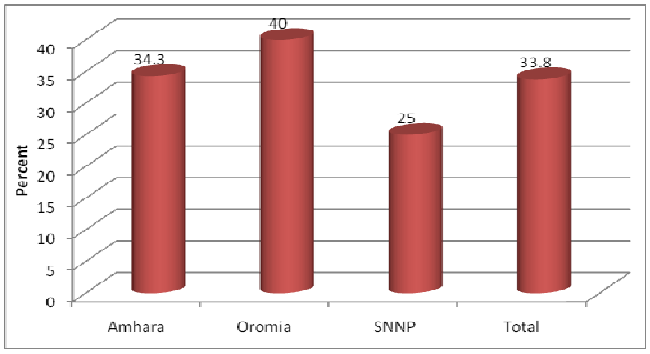
| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Signs to look for** | **Amhara** | **Oromia** | **SNNPR** | **Total** |
| Foetal presentation | 45.7 | 60.0 | 35.0 | 47.5 |
| Foetal heart rate | 42.9 | 48.0 | 40.0 | 43.8 |
| Signs of labor | 34.3 | 52.0 | 40.0 | 41.3 |
| Signs of anaemia | 37.1 | 28.0 | 40.0 | 35.0 |
| Signs of shock | 20.0 | 28.0 | 25.0 | 23.8 |
| Abdominal tenderness | 14.3 | 20.0 | 10.0 | 15.0 |
| Amount of external bleeding | 22.9 | 12.0 | 5.0 | 15.0 |
| Whether the blood is clotting | 11.4 | 20.0 | 5.0 | 12.5 |
| Don't know | 8.6 | 4.0 | 15.0 | 8.8 |
| Number of HEWs | 35 | 25 | 20 | 80 |

The knowledge on identification of signs of pregnancy complications that need immediate intervention is critical for early referral by HEWs. HEWs, after looking for the danger signs, are expected to check the vital signs and immediately refer the woman without delay. They should not undertake any vaginal examination. To assess their knowledge on how to handle a pregnant woman with vaginal bleeding, HEWs were asked what they would have done if they encounter such a case. The correct response of HEWs in order of frequency were to refer to a doctor or hospital (75%), to check vital signs (42.5%), and check foetal heart (28.8%). Although, the result is generally encouraging, the percent of HEWs who responded that they would do vaginal examination (10%) and speculum examination (12.5%) is not negligible. Similarly, the proportion of HEWs who would admit for observation and review (15%) is not small. About 2.5% of HEWs did not know what to do. A detailed regional data is shown in table 5.3. The proportion of HEWs who correctly mentioned that they would check vital signs and immediately refer to a doctor or hospital was 33.8%, and the regional distribution of these HEWs is presented in figure 5.1.

**Table 0.3: Percent of HEWs who listed actions to be taken on pregnant woman with vaginal bleeding**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Actions taken** | **Amhara** | **Oromia** | **SNNPR** | **Total** |
| Refer to a doctor or hospital | 80.0 | 80.0 | 60.0 | 75.0 |
| Check vital signs | 34.3 | 48.0 | 50.0 | 42.5 |
| Check foetal heart rate | 22.9 | 24.0 | 45.0 | 28.8 |
| Admit for observations and review | 11.4 | 24.0 | 10.0 | 15.0 |
| Perform speculum examination | 17.1 | 4.0 | 15.0 | 12.5 |
| Do vaginal examination | 11.4 | 8.0 | 10.0 | 10.0 |
| Don't know | 0.0 | 4.0 | 5.0 | 2.5 |
| Others | 17.1 | 8.0 | 5.0 | 11.3 |

**Figure 0.1: Percent of HEWs with comprehensive knowledge of handling a pregnant woman with vaginal bleeding by region**



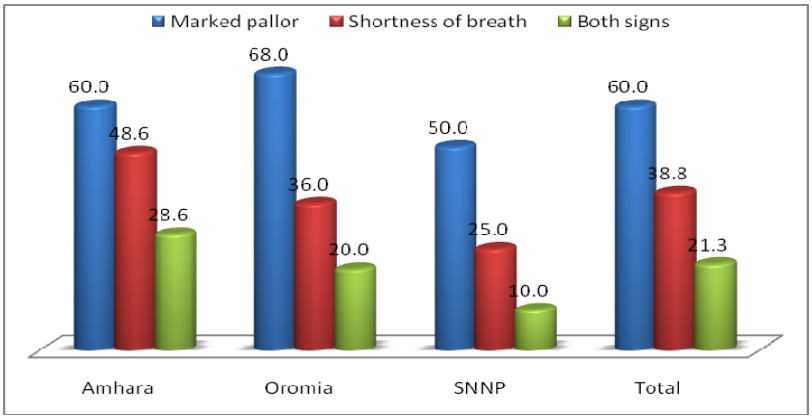

### 1.22.2 SEVERE ANEMIA IN PREGNANCY

An important contributor to maternal mortality is anemia during pregnancy. Although, there is no laboratory service to diagnose anemia at the health post level, HEWs are expected to identify signs of severe anemia clinically during antenatal care. Presence of marked pallor and shortness of breath are the two important signs that HEWs are required to know in order to diagnose severe anemia in pregnancy. Pregnant women who developed severe anemia may require management at higher health facilities including blood transfusion, and HEWs should refer them immediately. HEWs were asked to list the signs they look for to diagnose severe anemia and what they do when a pregnant woman comes with severe anemia. The responses of HEWs in order of frequency were to look for marked pallor (60%), shortness of breath (38.8%), general fatigue (37.5%), and oedema (36.3%). About 7.5% of HEWs did not know what signs to look for. One HEW in five (21.3%) had complete knowledge on the signs of severe anemia (i.e both marked pallor and shortness of breath), and the regional distribution is presented in figure 5.2.

**Table 0.4: Percent of HEWs who know signs of severe anemia during pregnancy, by region**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Signs to look for** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Marked pallor | 60.0 | 68.0 | 50.0 | 60.0 |
| Shortness of breath | 48.6 | 36.0 | 25.0 | 38.8 |
| General fatigue | 40.0 | 28.0 | 45.0 | 37.5 |
| Oedema | 45.7 | 32.0 | 25.0 | 36.3 |
| Don't know | 5.7 | 4.0 | 15.0 | 7.5 |

**Figure 0.2: Percent of HEWs who know the key signs of severe malaria during pregnancy**

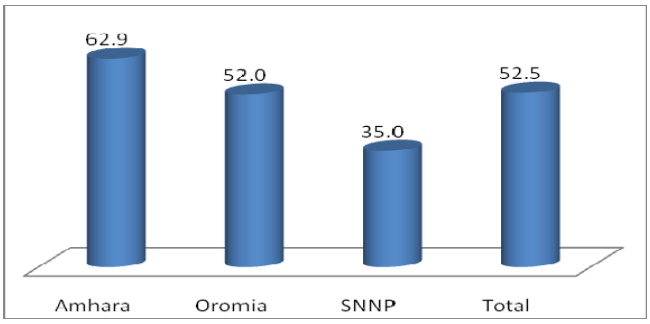



Early referral and immediate management of severe anemia in pregnant woman is critical to avert its consequences. Once HEWs suspect that a pregnant woman has severe anemia, they are expected to refer her to higher health facility. To assess if HEWs were making the right decisions with a pregnant woman with severe anemia, HEWs were asked what they would have done if they encountered such a case. The responses of HEWs in order of frequency were to advise relative on nutrition measures (56.3%), refer to a doctor or hospital (52.5%), to look for blood donors from her relatives (21.3%), and others (17.5%). Half of the HEWs were in position to make the correct decision (refer the patient) when they encounter a pregnant woman with severe anemia (figure 5.3).

**Table 0.5: Percent of HEWs who listed actions to be taken when a pregnant woman comes with severe anemia, by region**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Actions (measures)** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Advise relative on nutrition measures | 57.1 | 48.0 | 65.0 | 56.3 |
| Referral to doctor or hospital | 62.9 | 52.0 | 35.0 | 52.5 |
| Look for blood donors from her relatives | 34.3 | 4.0 | 20.0 | 21.3 |
| Don't know | 0.0 | 0.0 | 0.0 | 0.0 |
| Others | 17.1 | 16.0 | 20.0 | 17.5 |

**Figure 0.3: Percent of HEWs with correct knowledge of handling a pregnant woman with severe anemia by region**




### 1.22.3 SEVERE MALARIA IN PREGNANCY

Malaria in pregnancy should be managed appropriately to prevent complications such abortions, pre-term labor and maternal mortality. HEWs were trained to treat uncomplicated malaria, but they should

refer any patient with complicated malaria including pregnant women with malaria. In order for HEWs be able to refer patients with complicated malaria, they are required to identify the signs of severe malaria. The important signs HEWs should identify in a patient with severe malaria include high temperature (>38c), pallor, jaundice, and confusion/coma. HEWs were asked to list the signs they look for to diagnose severe malaria in a pregnant woman and what they do when a pregnant woman comes with such signs.

Most of the responses of HEWs were signs of uncomplicated malaria. The severe malaria specific responses of HEWs in order of frequency were to look for high temperature (62.5%), confusion/coma (22.5%), pallor (16.3%), and jaundice (11.25%). The proportion of HEWs who mentioned at least all of the four important signs were very low (2.5%), and the regional distribution is presented in table 5.6.

**Table 0.6: Percent of HEWs with knowledge on signs of severe malaria in pregnancy by region**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Signs of severe malaria in pregnancy** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| *High temperature (> 38C)* | 74.3 | 40.0 | 70.0 | 62.5 |
| *Confusion/coma* | 5.2 | 20.0 | 20.0 | 22.5 |
| *Pallor* | 11.4 | 24.0 | 15.0 | 16.3 |
| *Jaundice* | 11.4 | 20.0 | 0.0 | 11.3 |
| Sweating | 65.7 | 36.0 | 30.0 | 47.5 |
| Headache | 74.3 | 64.0 | 45.0 | 63.8 |
| Chills/shivering | 51.4 | 48.0 | 30.0 | 45.0 |
| Poor appetite | 62.9 | 48.0 | 55.0 | 56.3 |
| Vomiting | 45.7 | 28.0 | 35.0 | 37.5 |
| Cough | 20.0 | 4.0 | 5.0 | 11.3 |
| Diarrhea | 17.1 | 4.0 | 5.0 | 10.0 |
| Joint pain | 45.7 | 24.0 | 15.0 | 31.3 |
| Dizziness | 11.4 | 24.0 | 10.0 | 15.0 |
| Dehydration | 14.3 | 0.0 | 5.0 | 7.5 |
| Status of the foetus | 8.6 | 4.0 | 0.0 | 5.0 |
| Don't know | 0.0 | 0.0 | 5.0 | 1.3 |
| Others | 2.9 | 4.0 | 0.0 | 2.5 |

## 1.23 DELIVERY SERVICE

HEWs are equipped with "safe birth kits" and provide assisted delivery, which can influence maternal mortality levels by ensuring safe and hygienic environment. Recognizing that most women in Ethiopia prefer to deliver at home, HEWS provide the service either at home or at the health post. HEWs are trained to employ partograph during delivery. HEWs are trained to manually perform controlled cord traction and uterine massage as well as administer an oxytocic drug immediately after delivery, which can significantly reduce post partum hemorrhage (PPH). Moreover, HEWs are trained to detect problems during labor early and refer to the closest health center which provides CEMOC.

### 1.23.1 LAST ATTENDED DELIVERY

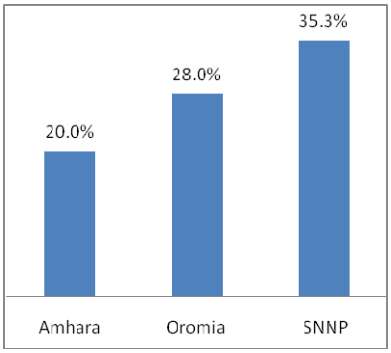
To assess if HEWs were providing delivery services at the community level, they were asked the time of the last delivery they had attended. More than a quarter (26.3%) of HEWs reported that they had never attended a delivery. Among HEWs who reported that they had attended a delivery, 17.5% HEWs attended a delivery in the one week preceding the survey, 32.5% in the one month preceding the survey, 11.3% in the 6 months, and 8.8% in more than 6 months preceding the survey. The percent of HEWs who

had never attended a delivery by region is presented in figure 5.4, and shows that 35.3%, 28%, and 20% of HEWs had never attended a delivery in SNNP, Oromia and Amhara respectively.

**Table 0.7: Percent distribution of HEWs by time of the last delivery attended**

| Time of last delivery attended | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Never | 20.0 | 28.0 | 35.3 | 26.3 |
| In the past week | 14.3 | 32.0 | 5.0 | 17.5 |
| In the past month | 45.7 | 24.0 | 20.0 | 32.5 |
| In the past 6 months | 8.6 | 8.0 | 20.0 | 11.3 |
| Before 6 months or more | 5.7 | 4.0 | 20.0 | 8.8 |
| Missing | 5.7 | 4.0 | 0.0 | 3.8 |

**Figure 0.4: Percent of HEWs who have never attended a delivery by region**



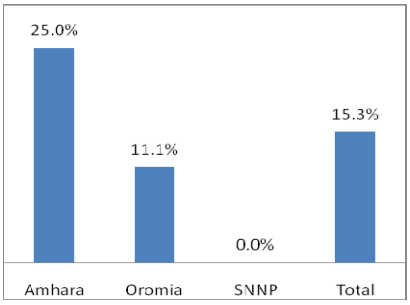

### 1.23.2 ESTABLISHING LABOR

The first step for HEWs in assisting delivery is establishing a woman is in labor. Thus, they are required to examine the woman and look for signs to establish labor. The important signs include regular uterine contraction associated with cervical dilatation and pain. HEWs were asked how they establish if a woman is in labor. The responses of HEWs in order of frequency were cervical dilatation (66.1%), regular uterine contraction (55.9%), breaking of water/ruptured membranes (40.7%), pain (33.9%), show (25.4%), and don't know (1.7%). The proportion of HEWs with complete knowledge of establishing labor – regular uterine contraction associated with cervical dilatation and pain – was 15.3%. The proportion of HEWs with comprehensive knowledge of establishing labor by region is presented in figure 5.5, and shows variation with 25%, 11.1% and 0% in Amhara, Oromia, and SNNP respectively.

**Table 0.8: Percent of HEWs who knows signs to establishing a woman in labor by region**

| Signs to establish labor | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Cervical dilatation | 67.9 | 61.1 | 69.2 | 66.1 |
| Regular uterine contraction | 50.0 | 61.1 | 61.5 | 55.9 |
| Breaking of water/ruptured membranes | 46.4 | 38.9 | 30.8 | 40.7 |
| Pain | 46.4 | 38.9 | 0.0 | 33.9 |
| Show (bloody mucoid discharge) | 21.4 | 27.8 | 30.8 | 25.4 |
| Don't know | 3.6 | 0.0 | 0.0 | 1.7 |
| Others | 10.7 | 5.6 | 7.7 | 8.5 |

**Figure 0.5: Percent of HEWs with comprehensive knowledge in establishing woman in labor by region**




### 1.23.3 MONITORING OF LABOR

Monitoring during labor is important to assess the progress and identify problems such as obstructed labor and eclampsia. Optimal labor monitoring includes measurement of observations on foetal heart rate, assessment of cervical dilatation, descent of head, uterine contraction, degree of moulding, and maternal blood pressure. If HEP is to contribute to reduction of maternal mortality, HEWs should be able to undertake optimal monitoring of labor. HEWs were asked what observations or monitoring they carry out during labor, and where they record the observations. The responses of HEWs on the type of observations they carry out during labor in order of frequency were monitoring foetal heart rate (62.7%), asses cervical dilatation (59.3%), assess descent of head (44.1%), monitor maternal blood pressure (44.1%), monitor maternal temperature (30.5%), assess degree of moulding (28.8%), monitor uterine contraction (25.4%), monitor maternal pulse (25.4%), monitor maternal respiratory rate (23.7%), check the urine (10.2%), and others (5.1%). The proportion of HEWs with comprehensive knowledge of monitoring during labor was very low (1.3%), with 2.9%, 0% and 0% in Amhara, Oromia, and SNNP respectively.

**Table 0.9: Percent of HEWs who mentioned observations monitored during labor, by region**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Observations monitored during labor** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Monitoring foetal heart rate | 53.6 | 72.2 | 69.2 | 62.7 |
| Asses cervical dilatation | 50.0 | 72.2 | 61.5 | 59.3 |
| Assess descent of head | 32.1 | 61.1 | 46.2 | 44.1 |
| Monitor maternal blood pressure | 46.4 | 27.8 | 61.5 | 44.1 |
| Monitor maternal temperature | 53.6 | 11.1 | 7.7 | 30.5 |
| Assess degree of moulding | 35.7 | 33.3 | 7.7 | 28.8 |
| Monitor uterine contraction | 25.0 | 33.3 | 15.4 | 25.4 |
| Monitor maternal pulse | 35.7 | 22.2 | 7.7 | 25.4 |
| Monitor maternal respiratory rate | 32.1 | 11.1 | 23.1 | 23.7 |
| Check the urine | 17.9 | 5.6 | 0.0 | 10.2 |
| Others | 7.1 | 5.3 | 0.0 | 5.1 |

WHO recommends the use of partograph to record the observations during the monitoring of active labor. A partograph is a simple but critical tool for labor and delivery. It can be introduced for use by HEWs to monitor active labor using only a stethoscope, sphigmometer and gloves, which are available at the health post level. The partograph is designed to facilitate recording and interpreting of signs of maternal and fetal well being. It can enable the HEWs to detect obstructed labor early. The responses of

HEWs on where they would record the observations during monitoring of active labor were partograph (27.1%), partograph and patient notes (23.7%), antenatal card (20.3%), and in patient notes (5.1%).

**Table 0.10: Percent distribution of HEWs by type of recording used for labor monitoring**

| Type of recording used during labor monitoring | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| On a partograph | 10.7 | 27.8 | 61.5 | 27.1 |
| On partograph and patient notes | 32.1 | 27.8 | 0.0 | 23.7 |
| On antenatal card | 28.6 | 11.1 | 15.4 | 20.3 |
| In patient notes | 10.7 | 0.0 | 0.0 | 5.1 |
| Others | 7.1 | 27.8 | 23.1 | 17.0 |
| Missing | 10.7 | 5.6 | 0.0 | 6.8 |

### 1.23.4 OBSTRUCTED LABOR

If labor is going to obstruct, the first stage is often prolonged with no change in cervical dilation, but the mother's membranes may rupture, and her liquor may escapes. Uterine contraction continues and forces the baby into its lower segment. However, the obstruction prevents the escape of the baby, and the lower segment moulds closely round the baby and becomes thin. The vagina becomes dry and “hot”, and the vulva and cervix become oedematous. The signs that indicate imminent rupture include the failure of labor to progress, Bandl's ring, and a distended bladder which is difficult to catheterize, and frequent strong uterine contractions, with little or no pause between them. Although the signs of obstructed labor are many and could be overwhelming to HEWs, they are required to know key signs of obstructed labor so that they can refer the mother early. The key signs that the HEWs should be able to look for while monitoring labor, or when a woman in labor presents to the them include maternal distress, no descent of presenting part, no change in cervical dilatation, Bandl’s ring and severe moulding.

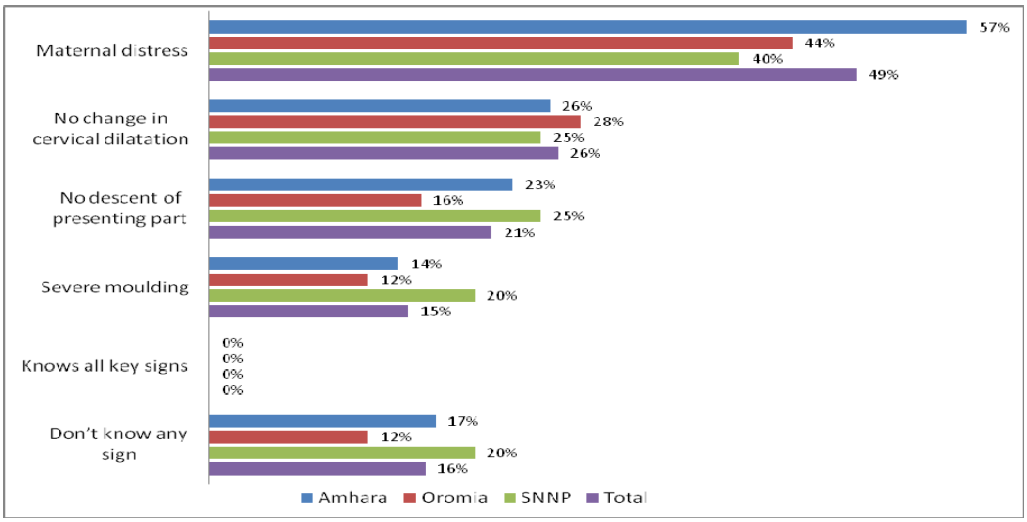
**Table 0.11: Percent of HEWs who know signs of obstructed labor by region**

| Signs of obstructed labor | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Maternal distress | 57.1 | 44.0 | 40.0 | 48.8 |
| Foetal distress | 28.6 | 32.0 | 35.0 | 31.3 |
| No change in cervical dilatation | 25.7 | 28.0 | 25.0 | 26.3 |
| No descent of presenting part | 22.9 | 16.0 | 25.0 | 21.3 |
| Foetal death | 28.6 | 8.0 | 5.0 | 16.3 |
| Severe moulding | 14.3 | 12.0 | 20.0 | 15.0 |
| First stage exceeds more than 12 hours | 22.9 | 8.0 | 10.0 | 15.0 |
| The second stage is >2 hours | 14.3 | 8.0 | 10.0 | 11.3 |
| Inadequate pelvis | 14.3 | 8.0 | 10.0 | 11.3 |
| Bandl’s ring | 8.6 | 12.0 | 10.0 | 10.0 |
| Hot dry vagina | 14.3 | 4.0 | 0.0 | 7.5 |
| Caput | 0.0 | 0.0 | 15.0 | 3.8 |
| Don’t know | 17.1 | 12.0 | 20.0 | 16.3 |
| Others | 2.9 | 4.0 | 5.0 | 5.0 |

To assess their knowledge in diagnosing obstructed labor, HEWs were asked to list the key signs of obstructed labor. The proportion of HEWs who listed the key signs of obstructed labor, namely maternal distress, no change in cervical dilatation, no descent of presenting part, and severe moulding were 48.8%,

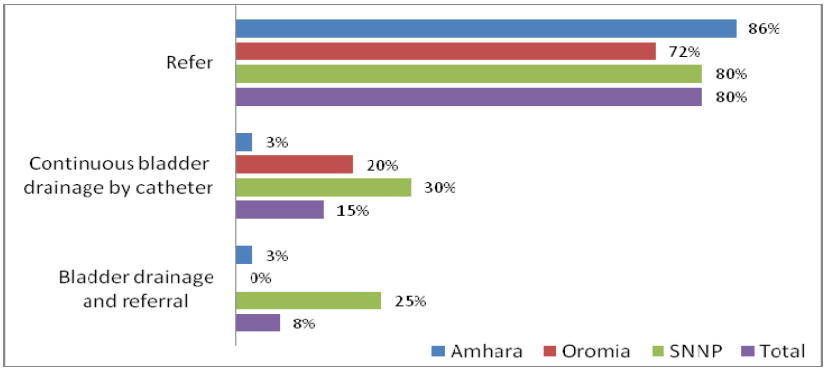
26.3%, 21.3%, and 15.0%, respectively. However, none of the HEWs were able to list all the key signs of obstructed labor. The other responses on the signs of obstructed labor were foetal distress (31.3%), foetal death (16.3%), first stage exceeds more than 12 hours (15.0%), the second stage is >2 hours (11.3%), inadequate pelvis (11.3%), Bandl's ring (10.0%), hot dry vagina (7.5%), caput (3.8%), and others (5.0%). About 16.3% of HEWs were not able to list any signs of obstructed labor.

**Figure 0.6: Percent of HEWs who know key signs of obstructed labor by region**




Obstructed labor is the major contributing factor for maternal and neonatal morbidity and mortality. In obstructed labor, the contraction of the uterus becomes hypertonic with poor relaxation between contractions, which results in poor perfusion of the placenta leading into fetal distress, and potential death of the baby. The two main dangers of obstructed labor to the mother are fistula (usually in primips) and uterine rupture (usually in multips), if the mother doesn't die. She is also at risk of developing septic shock, peritonitis, peritoneal abscesses, atonic postpartum haemorrhage, and foot drop from the pressure of his head on her sciatic nerves. To prevent the complications of obstructed labor, the women should be referred to higher health facilities with CEMOS. The expectation from HEWs is to identify such women and refer immediately, possibility after ensuring continuous drainage of the bladder. To assess how HEWs manage women with obstructed labor, they were asked what actions they take when encounter a woman with obstructed labor. The responses of HEWs in order of frequency were refer (80%), continuous bladder drainage by catheter (15%), and administer analgesics (2.5%). Moreover, 7.5% of HEWs answered other responses, and 3.8% did not know what to do.

**Figure 0.7: Percent of HEWs who know correct actions with obstructed labor, by region**



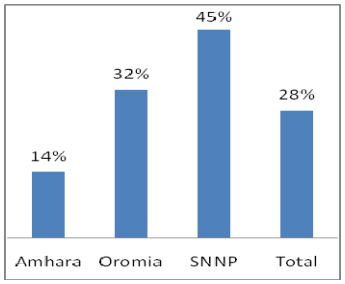
### 1.23.5 ECLAMPSIA

Pregnancy induced hypertension and preeclampsia occurs in about 15% of all pregnancies at term and it is a major contributor to maternal and perinatal morbidity and mortality. Since the only treatment is delivery through induction of labor to prevent complications, HEWs should be able to recognize the signs and refer immediately to higher health facilities. HEWs were asked to list the signs of eclampsia to assess their knowledge and determine if women with eclampsia were handled correctly. The responses of HEWs on the signs of eclampsia in order of frequency were oedema of feet, hands, and all face (48.8%), high blood pressure (41.3%), fits/convulsions (22.5%), and proteinuria (20%). However, only 3.8% of HEWs knew all key signs of eclampsia, and 27.5% of HEWs didn't know any signs of eclampsia.

**Table 0.12: Percent of HEW who know the key signs of eclampsia by region**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Signs of eclampsia** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Oedema (Feet, hands, all face) | 65.7 | 32.0 | 40.0 | 48.8 |
| High BP | 48.6 | 32.0 | 40.0 | 41.3 |
| Fits/convulsions | 25.7 | 28.0 | 10.0 | 22.5 |
| Proteinuria | 31.4 | 16.0 | 5.0 | 20.0 |

**Figure 0.8: Percent of HEWs who don't know any signs of eclampsia by region**




### 1.23.6 BLEEDING AFTER DELIVERY

Post partum haemorrhage (PPH) is one of the leading causes of maternal mortality. HEWs are trained to manage PPH and immediately refer mothers who may need the care of higher health professionals. To assess their knowledge on handling PPH, HEWs were asked for what signs they look when a woman comes with or develops heavy bleeding following delivery. The proportion of HEWs who mentioned signs of shock (dizziness, low BP), amount of external bleeding, un-contracted uterus, and retained products/placenta, which are the key signs that should be looked for, were 43.8%, 42.5%, 23.8%, and 23.8%, respectively. However, only 5% of HEWs had comprehensive knowledge on examining a woman with heavy bleeding following delivery. Other responses included signs of anaemia (43.8%), genital tract injuries (32.5%), check if bladder is full (15%), and others (7.5%). About 11.3% of HEWs did not know what signs to look for.

**Table 0.13: Percent of HEWs who mentioned signs to look for in a woman with heavy bleeding following delivery by region**

| Signs to look for in a woman with heavy bleeding after delivery | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Signs of shock (dizziness, low BP) | 37.1 | 52.0 | 45.0 | 43.8 |
| Signs of anaemia | 45.7 | 40.0 | 45.0 | 43.8 |
| Amount of external bleeding | 54.3 | 40.0 | 25.0 | 42.5 |
| Genital tract injuries | 34.3 | 28.0 | 35.0 | 32.5 |
| Un-contracted uterus | 37.1 | 8.0 | 20.0 | 23.8 |
| Retained products/placenta | 17.1 | 32.0 | 25.0 | 23.8 |
| Check if bladder is full | 20.0 | 12.0 | 10.0 | 15.0 |
| Don't know | 14.3 | 4.0 | 15.0 | 11.3 |

To assess how HEWs would manage women who come or develop heavy bleeding following delivery, they were asked what actions they take when encountered with such a case. The responses of HEWs in order of frequency were refer (73.8%), give ergometrine IM (38.8%), examine for laceration (27.5%), manual removal of retained products (17.5%), raise foot of bed (17.5%), empty the woman's bladder (15%), massage the fundus (13.8%), and don't know (2.5%). About 5% of HEWs knew all the basic actions (massage the fundus, empty the woman's bladder, and give ergometrine IM) that should be undertaken when a woman comes with or develops heavy bleeding following delivery.

**Table 0.14: Percent of HEWs who actions to be taken with a woman with heavy bleeding following delivery by region**

| Actions to manage a woman with heavy bleeding following delivery | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Refer | 71.4 | 84.0 | 65.0 | 73.8 |
| Give Ergometrine IM | 48.6 | 32.0 | 30.0 | 38.8 |
| Examine the woman for laceration | 31.4 | 20.0 | 30.0 | 27.5 |
| Manual removal of retained products | 14.3 | 28.0 | 10.0 | 17.5 |
| Raise foot of bed | 25.7 | 16.0 | 5.0 | 17.5 |
| Empty the woman's bladder | 20.0 | 0.0 | 25.0 | 15.0 |
| Massage the fundus | 17.1 | 4.0 | 20.0 | 13.8 |
| Don't know | 0.0 | 4.0 | 5.0 | 2.5 |

### 1.23.7 RETAINED PLACENTA

Retained products and placenta is a major cause of PPH, and it is a condition that can be managed by HEWs. To assess how HEWs manage a woman with retained placenta, they were asked what action they would take when a woman they just delivered has a retained placenta. The response of HEWs on the action they would take in order of frequency were refer (66.3%), manual removal of the placenta (35.0%), controlled cord traction (15.0%), empty urinary bladder (15.0%), monitor vital signs for shock and act (11.3%), oxytocics (8.8%), check uterus is well contracted (8.8%), and others (11.3%).

**Table 0.15: Percent of HEWs who mentioned actions to be taken to manage retained placenta**

| Actions to manage retained placenta | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Refer | 54.3 | 84.0 | 65.0 | 66.3 |
| Manual removal of the placenta | 45.7 | 24.0 | 30.0 | 35.0 |
| Controlled cord traction | 17.1 | 4.0 | 25.0 | 15.0 |
| Empty urinary bladder | 17.1 | 4.0 | 25.0 | 15.0 |
| Monitor vital signs for shock and act | 14.3 | 0.0 | 20.0 | 11.3 |
| Oxytocics | 8.6 | 12.0 | 5.0 | 8.8 |
| Check uterus is well contracted | 8.6 | 12.0 | 5.0 | 8.8 |

### 1.23.8 INFECTION DURING LABOR

Labor complicated with infection is one of the challenges in Ethiopia because most deliveries are not assisted by skilled personnel and occur at home where safe and hygienic environment cannot be ensured. Management of labor complicated with infection can only be undertaken in facilities with basic emergency services. HEWs are required to diagnose such cases and refer to the next health facility for appropriate management. In order for HEWs to refer such cases on time and contribute in the reduction of maternal mortality they should be able to identify signs of complicated labor with infection. To assess their knowledge and skills in diagnosing complicated labor with infection, they were asked to list the signs of complicated labor with infection. The response of HEWs in order of frequency were high fever (56.3%), foul smelling lochia (33.8%), high pulse (31.3%), tender abdomen (31.3%), un-recordable BP (23.8%), and others (6.3%). The proportion of HEWs who have comprehensive knowledge on the signs of complicated labor with infection was low – 5%. Moreover, about one in five HEWs (18.8%) did not know any signs of complicated labor with infection.

**Table 0.16: Percent of HEWs who know signs of complicated labor with infection by region**

| Signs of complicated labor with infection | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| High fever | 71.4 | 36.0 | 55.0 | 56.3 |
| Foul smelling lochia | 37.1 | 32.0 | 30.0 | 33.8 |
| High pulse | 37.1 | 24.0 | 30.0 | 31.3 |
| Tender abdomen | 22.9 | 48.0 | 25.0 | 31.3 |
| Un-recordable BP | 25.7 | 32.0 | 10.0 | 23.8 |
| Don't know | 17.1 | 16.0 | 25.0 | 18.8 |

To assess how HEWs would manage women with complicated labor with infection, they were also asked what actions they would take when a woman comes with complicated labor with infection 48 hours after delivery. The response of HEWs in order of frequency were referral to doctor or hospital (70%), examine lochia, perineum and breasts (16.3%), administer analgesics/antipyretic (12.5%), palpate abdomen (11.3%), malaria prophylaxis in endemic areas (10%), and other (5%). About 12.5% of HEWs did not know what to do.

**Table 0.17: Percent of HEWs who know actions to manage a woman with complicated labor with infection 48 hours after delivery**

| Actions to manage complicated labor with infection | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Referral to doctor or hospital | 77.1 | 60.0 | 70.0 | 70.0 |
| Examine lochia, perineum and breasts | 20.0 | 16.0 | 10.0 | 16.3 |
| Administer analgesics/antipyretic | 5.7 | 16.0 | 20.0 | 12.5 |
| Palpate abdomen | 2.9 | 20.0 | 15.0 | 11.3 |
| Malaria prophylaxis in endemic areas | 11.4 | 12.0 | 5.0 | 10.0 |
| Don't know | 17.1 | 8.0 | 10.0 | 12.5 |

## 1.24 NEWBORN CARE

Immediately after delivery, HEWs are expected to provide life-saving care of newborns such as wiping the face after birth of head, ensuring the baby is breathing, clearing the airways of blood and mucus, cord care, drying and wrapping the newborn in a warm clean clothing and assisting breathing with ambu bag. They are also expected to weigh the newborns; and administer BCG and polio immunizations prior to discharge. They were trained to be equipped with the skills to handle low-birth weight newborns to ensure thermal protection. HEWs should also provide necessary advice and instructions on breast feeding, nutrition, and encourage mothers to initiate breast feeding early. The immediate care given to newborn is critical in saving life. To assess HEWs' knowledge and skills in providing immediate care to newborn, HEWs were asked to list the immediate care they give to newborn while attending to a delivery. The responses of HEWs in order of frequency were ensure baby is breathing (67.8), cord care with sterile cut 4 – 6 cm from umbilicus (61%), after birth of head, wipe face (57.6%), weigh the baby (50.9%), initiate breast feeding within one hour (47.5%), thermal protection (33.9%), assess/examine newborn within one hour (23.7%), eye prophylaxis (18.6%), and other (6.8%). The proportion of HEWs with comprehensive knowledge of immediate care given to newborn was 10.2% (with 14.3%, 0%, and 15.4% in Amhara, Oromia, and SNNP, respectively).

**Table 0.18: Percent of HEWs who know immediate care given to newborn by region**

| Immediate care given to newborn | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Ensure baby is breathing | 75.0 | 66.7 | 53.9 | 67.8 |
| Cord care (sterile cut 4 – 6 cm/umbilicus) | 71.4 | 50.0 | 53.9 | 61.0 |
| After birth of head, wipe face | 60.7 | 55.6 | 53.9 | 57.6 |
| Weigh the baby | 46.4 | 50.0 | 61.5 | 50.9 |
| Initiate breast feeding one hour. | 57.1 | 44.4 | 30.8 | 47.5 |
| Thermal protection | 32.1 | 16.7 | 61.5 | 33.9 |
| Assess/examine newborn within one hour | 32.1 | 22.2 | 7.7 | 23.7 |
| Eye prophylaxis | 28.6 | 11.1 | 7.7 | 18.6 |

To assess how HEWs manage a newborn with breathing difficulty, they were asked what actions they would take when a newborn fails to breathe at birth. The response of HEWs in order of frequency were to clear the airways of blood and mucus (67.5%), dry and wrap baby in a warm clean cloth (45%), assist breathing with ambu bag (26.3%), provide oxygen with ambu bag (20%), provide suction if there is meconium (16.3%), do cardiac massage (5%), don't know (3.8%), and other (15%). The proportion of HEWs with comprehensive knowledge on handling a newborn who fails to breathe at birth (clearing the

airways, drying and wrapping the baby in a warm cloth, and assisting breathing with ambu bag) was 11.3%, with regional variation – 20%, 4%, and 5% in Amhara, Oromia, and SNNP respectively.

**Table 0.19: Percent of HEWs who mentioned actions taken when a newborn fails to breath at birth**

| Actions taken to mange a newborn with breathing difficulty at birth | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNPR | Total |
| Clear the airways of blood and mucus | 57.1 | 76.0 | 75.0 | 67.5 |
| Dry and wrap baby in a warm clean cloth | 60.0 | 32.0 | 35.0 | 45.0 |
| Assist breathing with ambu bag | 40.0 | 16.0 | 15.0 | 26.3 |
| Provide oxygen with ambu bag | 22.9 | 20.0 | 15.0 | 20.0 |
| Provide suction if there is meconium | 20.0 | 16.0 | 10.0 | 16.3 |
| Do cardiac massage | 2.9 | 4.0 | 10.0 | 5.0 |
| Don't know | 2.9 | 0.0 | 10.0 | 3.8 |

### 1.24.1 NEWBORN INFECTION (SEPSIS)

Although, HEWs are not allowed to treat newborn infections, they are required to identify the key signs and symptoms of infection in the newborn (sepsis) so that they can council the mother and refer to higher health facility. To assess their knowledge in diagnosing newborn with sepsis, HEWs were asked to list the signs and symptoms of infection in the newborn. The responses of HEWs in order of frequency were poor or no breastfeeding (41.3%), respiratory difficulty (26.3%), hyperthermia or hypothermia (23.8%), restlessness or irritability (23.8%), foci of infection may be found in throat, skin, eyes (22.5%), no apparent source of infection (6.3%), and others (2.5%). The proportion of HEWs with comprehensive knowledge on the signs and symptoms of infection in newborn was low (2.5%). Moreover, more than a quarter (28.8%) of the HEWs didn't know any signs and symptoms of infection in the newborn.

**Table 0.20: Percent of HEWs who know signs and symptoms of infection in the newborn**

| Signs and symptoms of infection in newborn | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNPR | Total |
| Poor or no breastfeeding | 42.9 | 44.0 | 35.0 | 41.3 |
| Respiratory difficulty | 20.0 | 44.0 | 15.0 | 26.3 |
| Hyperthermia or hypothermia | 31.4 | 16.0 | 20.0 | 23.8 |
| Restlessness or irritability | 20.0 | 32.0 | 20.0 | 23.8 |
| Foci of infection may be found in throat, skin, eyes | 34.3 | 20.0 | 5.0 | 22.5 |
| No apparent source of infection | 5.7 | 4.0 | 10.0 | 6.3 |
| Don't know | 34.3 | 12.0 | 40.0 | 28.8 |

To assess how newborn babies with infection are handled in the village, HEWs were asked what actions they take when a newborn is presented with signs of infection. The response of HEWs in order of frequency were to refer (68.8%), continue breastfeeding (26.3%), keep the baby warm (23.8%), explain situation/condition to the mother (22.5%), keep airway clear (20%), don't know (6.3%), other (3.8%). The proportion of HEWs with comprehensive knowledge on handling a newborn who presents with infection (which includes continuing breast feeding, keeping warm and keeping the airways clear in addition to referral) was 5%, with regional variation – 11.4%, 0%, and 0% in Amhara, Oromia, and SNNP respectively (table 5.21).

**Table 0.21: Percent of HEWs who mentioned actions taken in a newborn with signs of infection**

| Actions to manage a newborn with signs of infection | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNPR | Total |
| Refer | 77.1 | 72.0 | 50.0 | 68.8 |
| Continue breastfeeding | 25.7 | 24.0 | 30.0 | 26.3 |
| Keep the baby warm | 31.4 | 24.0 | 10.0 | 23.8 |
| Explain situation/condition to the mother | 34.3 | 16.0 | 10.0 | 22.5 |
| Keep airway clear | 25.7 | 16.0 | 15.0 | 20.0 |
| Don't know | 2.9 | 4.0 | 15.0 | 6.3 |

### 1.24.2 LOW BIRTH WEIGHT NEWBORN

One of the immediate care HEWs provide to newborn is thermal protection by drying and wrapping the newborn in warm clean clothing, which is particularly critical in newborn weighing less than 2.5kgs. HEWs are expected to weigh the newborns before discharging the mother; and if the newborn is under-weight, HEWs are expected to handle low-birth weight newborns. In addition to ensuring thermal protection, HEWs are expected to provide extra support to mother to establish bonding, to monitor baby closely for 24 hours, and to ensure infection prevention. These measures help in the survival of the low-birth weight newborns. To assess if HEWs have adequate knowledge and skills, they were asked for the actions they would take when a newborn weighs less than 2.5kgs. The responses of HEWs on the actions they would take when a newborn weighs less than 2.5kgs in order of frequency were refer to hospital (45%), ensure thermal protection eg. skin to skin (32.5%), provide extra support to mother to establish bonding (28.8%), monitor sucking capability (20%), monitor baby closely for first 24 hours (16.3%), ensure infection prevention (5%), and other (5%). Only 6.3% of HEWs did not know what action to take. The proportion of HEWs with comprehensive knowledge was very low (1.3%).

**Table 0.22: Percent of HEWs who mentioned actions taken when a newborn weighs less than 2.5kgs**

| Actions to manage low birth weight newborn | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNPR | Total |
| Refer to hospital | 60.0 | 36.0 | 30.0 | 45.0 |
| Ensure thermal protection (skin to skin etc) | 28.6 | 36.0 | 35.0 | 32.5 |
| Provide extra support to mother to establish | 20.0 | 40.0 | 30.0 | 28.8 |
| Monitor sucking capability | 20.0 | 16.0 | 25.0 | 20.0 |
| Monitor baby closely for first 24 hours | 11.4 | 16.0 | 25.0 | 16.3 |
| Ensure infection prevention | 5.7 | 4.0 | 5.0 | 5.0 |
| Don't know | 0.0 | 16.0 | 5.0 | 6.3 |

## 1.25 CHILD CARE

### 1.25.1 INTEGRATED CHILDHOOD ILLNESSES MANAGEMENT (IMCI)

Child mortality in Ethiopia is one of the highest in the world. Pneumonia, diarrhea, malaria, measles, and malnutrition contribute to more than 70% of mortality in children under the age of 5 years. HEP interventions give focus to these health problems, to prevent and reduce the high child death. HEP adopted an integrated childhood illnesses management (IMCI) to identify the problems that children have in their living areas and at the health posts. Integrated management of childhood illnesses entails not only solving the problem that the child has but also solving the all round problems of the child, which

requires looking for other illnesses the child might have, checking for danger sings, checking the vaccination status, undertaking growth monitoring and nutritional assessment.

To assess the knowledge of HEWs on IMCI and status of actual implementation of IMCI, HEWs were asked what they would look for or ask if a sick child comes to them for help. The responses of HEWs in order of frequency were check for the presence of cough, diarrhea, and fever (65%), check for the four general danger signs (47.5%), check weight against a growth chart (36.3%), check vaccination status (36.3%), ask caretaker of child < 2 yrs about breastfeeding and complementary foods (28.8%), and ask if other family members had sickness in last 15 days (23.8%).

**Table 0.23: Percent of HEWs who mentioned what to do when a sick child comes**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Components of IMCI** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Child checked for the presence of cough, diarrhea, and fever | 71.4 | 68.0 | 50.0 | 65.0 |
| Child checked for the four general danger signs | 62.9 | 32.0 | 40.0 | 47.5 |
| Child's weight checked against a growth chart | 40.0 | 36.0 | 30.0 | 36.3 |
| Child's vaccination status checked | 42.9 | 40.0 | 20.0 | 36.3 |
| Ask caretaker of child <2yrs about breastfeeding and complementary foods | 37.1 | 24.0 | 20.0 | 28.8 |
| Ask if other family members had sickness in last 15 days | 28.6 | 16.0 | 25.0 | 23.8 |
| Don't know | 2.9 | 0.0 | 0.0 | 1.3 |

Following the assessment based on the strategy of IMCI of a sick child who was presented to HEWs, HEWs are expected to decide what to do with the sick child. HEWs are expected to undertake the following: segregate simple diseases from the severe ones, urgently refer those children with severe illnesses to the next health facility, and decide what can be done for the child with simple illness, what kind of care can be given at his home and what can be done to him if his illness gets severe. Moreover, HEWs provide education on how to prevent these diseases and provide vaccination services.

HEWs were asked to list the various possible measures they could take when a sick child is presented. The responses of HEWs in order of frequency were child needing referral is referred (67.5%), caretaker of sick child is advised to give extra fluids and continue feeding (33.8%), child needing oral antibiotic prescribed the drug(s) (27.5%), child needing vaccinations leaves facility with all needed vaccinations (23.8%), child needing oral anti-pain or anti-malarial is prescribed the drug(s) (18.8%), and caretaker of child who is prescribed ORS and/or antimalarial can describe how to give the treatment (17.5%).

**Table 0.24: Percent of HEWs who take measures when a sick child is presented**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Measures taken when a sick child is presented** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Child needing referral is referred | 77.1 | 56.0 | 65.0 | 67.5 |
| Caretaker is advised to give extra fluids and continue feeding | 34.3 | 32.0 | 35.0 | 33.8 |
| Child needing oral antibiotic prescribed the drug(s) | 25.7 | 24.0 | 35.0 | 27.5 |
| Child needing vaccinations leaves facility with all vaccinations | 31.4 | 20.0 | 15.0 | 23.8 |
| Child needing oral antipain/anti-malarial is prescribed the drug(s) | 22.9 | 12.0 | 20.0 | 18.8 |
| Caretaker of child who is prescribed drugs can describe how to give the treatment | 22.9 | 12.0 | 15.0 | 17.5 |
| Don't know | 8.6 | 0.0 | 0.0 | 3.8 |

### 1.25.2 DANGER SIGNS

To undertake IMCI, HEWs have been trained on the use of indicative signs (danger signs) of severe diseases to refer the sick child without delay to the next level of health facility. The danger signs include 1) when the child cannot drink or breast feed; 2) when the child vomits as he breast feeds or vomits immediately after food; 3) when he had shivering; and 4) when the child is weak or unconscious. When a child is presented with one or the other danger signs, the child should be urgently referred by HEWs to the next higher health facility.

To assess HEWs knowledge on the danger signs, they were asked to list the signs that would make them refer a child to the next level of health facility. The response of HEWs in order of frequency were when the child is lethargic/abnormally sleepy/ unconscious (65%), vomits everything (50%), has not responded to usual treatment (41.3%), has a very high fever (40%), has had convulsions (35%), looks very unwell (33.8%), is not eating or drinking (33.8%), has severe dehydration (33.8%), has severe pneumonia (33.8%), and has severe malnutrition/anemia (26.3%).

**Table 0.25: Percent of HEWs who know the danger signs that would make HEWs refer a child**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Danger signs requiring referral** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Child is lethargic/abnormally sleepy/ unconscious | 71.4 | 52.0 | 70.0 | 65.0 |
| Child vomits everything | 45.7 | 56.0 | 50.0 | 50.0 |
| Child has not responded to usual treatment | 57.1 | 28.0 | 30.0 | 41.3 |
| Child has a very high fever | 42.9 | 36.0 | 40.0 | 40.0 |
| Child has had convulsions | 51.4 | 16.0 | 30.0 | 35.0 |
| Child looks very unwell | 42.9 | 32.0 | 20.0 | 33.8 |
| Child is not eating or drinking | 34.3 | 36.0 | 30.0 | 33.8 |
| Child has severe dehydration | 34.3 | 44.0 | 20.0 | 33.8 |
| Child has severe pneumonia | 37.1 | 40.0 | 20.0 | 33.8 |
| Child has severe malnutrition/anemia | 31.4 | 24.0 | 20.0 | 26.3 |

### 1.25.3 ACUTE RESPIRATORY INFECTIONS (ARI)

Many children are brought to health facilities with simple health problems such as cough or breathing problem. Most children can be assisted by simple care, given at the household level. HEWs encourage home management of simple coughs and cold without medicine, and advice the family to bring the child, if there are suggestive signs that the illness is getting worse, and see the child again if no improvement in 5 days. However, HEWs are trained to refer a child to next health facility if the child comes with severe pneumonia, or if cough has been for more than 30 days.

To assess how children with ARI are managed at the community level, HEWs were asked what basic messages for counseling/education they would give when a child comes with ARI. The responses of the HEWs were detection of early pneumonia using simple signs like rapid breathing and chest in drawing (48.8%); information on when, where and how to bring the child with pneumonia (43.8%); and home management of simple coughs and colds without medicine (33.8%). About 8.8% of HEWs did not know what to do when a child comes with ARI.

**Table 0.26: Percent of HEWs with knowledge on how to handle a child with ARI by region**

| Handling a child with ARI | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNPR | Total |
| Detection of early pneumonia using simple signs | 62.9 | 36.0 | 40.0 | 48.8 |
| Information on when, where & how to bring the child with pneumonia | 57.1 | 24.0 | 45.0 | 43.8 |
| Home management of simple coughs and colds w/o medicine | 40.0 | 36.0 | 20.0 | 33.8 |
| Don't know | 2.9 | 16.0 | 10.0 | 8.8 |

Seriously sick children with severe pneumonia require medicine (antibiotics), which is not provided at the health post level. Thus, HEWs are expected to identify such patients using two indicative signs, and refer immediately to higher health facility. The signs are fast breathing and lower chest in drawing, which both are signs of severe pneumonia. To assess if children with severe pneumonia are appropriately managed, HEWs were asked to identify the indicative (danger signs) of severe ARI (pneumonia). The response of HEWs in order of frequency were fever (58.8%), fast or difficulty breathing (58.8%), cough (53.8%), chest drawing (48.8%), unconsciousness (20%), poor appetite (17.5%), vomiting (15%), skin discoloration (12.5%), and convulsions (11.3%). About 7.5% of HEWs did not know the indicative signs of pneumonia.

**Table 0.27: Percent of HEWs with knowledge on indicative signs of sever ARI**

| Indicative signs of severe ARI | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Fever | 74.3 | 40.0 | 55.0 | 58.8 |
| Fast or difficulty breathing | 68.6 | 48.0 | 55.0 | 58.8 |
| Cough | 57.1 | 36.0 | 70.0 | 53.8 |
| Chest drawing | 60.0 | 48.0 | 30.0 | 48.8 |
| Unconsciousness | 22.9 | 20.0 | 15.0 | 20.0 |
| Poor appetite | 22.9 | 8.0 | 20.0 | 17.5 |
| Vomiting | 14.3 | 16.0 | 15.0 | 15.0 |
| Skin discoloration | 14.3 | 16.0 | 5.0 | 12.5 |
| Convulsions | 11.4 | 12.0 | 10.0 | 11.3 |
| Don't know | 0.0 | 16.0 | 10.0 | 7.5 |

### 1.25.4 DIARRHEAL DISEASE

All HEWs manage diarrheal diseases through education, demonstration, and provision of ORS and homemade fluids to prevent child morbidity and mortality due to diarrheal diseases, and contribute in reaching the MDG-4. If the child has moderate or no dehydration, they manage the case at the village level. HEWs are also trained to identify children with severe dehydration and urgently refer to higher level health facilities. To assess their knowledge in the management of children with diarrhea, they were asked what advice they give to a mother of a child with diarrheal disease. The response of HEWs in order of frequency were to give the child more fluids than usual to prevent dehydration (80%), continue to feed the child (66.3%), bring the child to the HP if child doesn't become better in 3 days or earlier i.e. if child develops some signs/symptoms like many watery stools, repeated vomiting, marked thirst, fever, blood in stool (36.3%), and others (3.8%).

**Table 0.28: Percent of HEWs who know the advice given to a mother of a child with diarrheal disease**

| Advice given to a mother of child with diarrhea | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Give more fluids than usual to prevent dehydration | 77.1 | 80.0 | 85.0 | 80.0 |
| Continue to feed the child | 82.9 | 52.0 | 55.0 | 66.3 |
| Bring to the HP if doesn't become better in 3 days | 51.4 | 24.0 | 25.0 | 36.3 |

### 1.25.5 NUTRITION

According to the 2000 Demographic Health Survey (DHS) more than 50% of Ethiopian children's were malnourished, and malnutrition and other related diseases were found to contribute to 60% deaths in children under the age of 5 years. For this reason, nutrition is one of the service packages of HEP, and HEWs are expected to undertake growth monitoring, breast feeding, supplementary feeding, education and demonstration of nutritious food preparation among others. HEWs were asked to list the basic messages for education or counseling the need to emphasize for a proper nutrition services. The responses of HEWs on the basic messages they need to emphasize for proper nutrition were balanced diet (85%), importance of breastfeeding and weaning foods (70%), desirable food habit (26.3%), use of iodized salt (20%), and consumption of fortified food (13.8%).

**Table 0.29: Percent of HEWs with knowledge on basic messages for counseling on proper nutrition**

| Basic messages for counseling on proper nutrition | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| Balanced diet | 100.0 | 68.0 | 80.0 | 85.0 |
| Importance of breastfeeding and weaning foods | 57.1 | 24.0 | 75.0 | 70.0 |
| Desirable food habit | 25.7 | 36.0 | 15.0 | 26.3 |
| Use of iodized salt | 28.6 | 12.0 | 15.0 | 20.0 |
| Consumption of fortified food | 20.0 | 12.0 | 5.0 | 13.8 |
| Don't know | 0.0 | 0.0 | 5.0 | 1.3 |

## 1.26 FAMILY PLANNING

The aim of the family planning service package is to provide correct information on family planning services and raise their awareness on the types and utilization of different contraceptives so that they benefit from the available services depending on their choices. During counseling, HEWs are expected to make emphasis on where to get when they need additional information on contraceptive methods and services; on the types, names, nature and usage of contraceptives; on the side effects and contraindications of contraceptives, and what action to take when there are problems; and rumors and harmful beliefs related to contraceptives and those that affect family planning services.

To evaluate if HEWs have comprehensive knowledge on counseling information, they were asked to list the counseling information they give when a mother comes for family planning services. The responses of HEWs on the counseling information were to provide information about all methods (60%), benefits of various methods (57.5%), about risk of methods (56.3%), about effectiveness of methods (43.8%), and other (5%).

**Table 0.30: Percent of HEWs with knowledge on counseling for family planning**

| Counseling information for family planning | Percent of HEWs | | | |
|---|---|---|---|---|
| | Amhara | Oromia | SNNP | Total |
| About all methods | 62.9 | 56.0 | 60.0 | 60.0 |
| Benefits of various methods | 62.9 | 52.0 | 55.0 | 57.5 |
| About risk of methods | 65.7 | 36.0 | 65.0 | 56.3 |
| About effectiveness of methods | 48.6 | 36.0 | 45.0 | 43.8 |

## 1.27 MALARIA

Malaria is one of the major health problems in Ethiopia. Recognizing that malaria cases should be treated promptly with effective anti-malarial drugs, the government incorporated treatment of uncomplicated malaria cases at the health post level. To undertake appropriate management of malaria cases, HEWs were trained to diagnose and treat patients with uncomplicated malaria.

To assess HEWs' knowledge on the signs and symptoms of uncomplicated malaria, they were asked to list the signs and symptoms of a malaria case. The signs and symptoms of malaria mentioned by more than 50% of in order of frequency were headache (78.8%), chills/ shivering (76.3%), high temperature - above 38c (66.3%), poor appetite (66.3%), sweating (63.8%), and vomiting (60%). The other responses are presented in table 5.31.

**Table 0.31: Percent of HEWs with knowledge on the signs of a malaria patient**

| | Percent of HEWs | | | |
|---|---|---|---|---|
| **Signs of malaria** | **Amhara** | **Oromia** | **SNNP** | **Total** |
| Headache | 74.3 | 84.0 | 80.0 | 78.8 |
| Chills/ shivering | 77.1 | 76.0 | 75.0 | 76.3 |
| High temperature (above 38c) | 71.4 | 64.0 | 60.0 | 66.3 |
| Poor appetite | 65.7 | 68.0 | 65.0 | 66.3 |
| Sweating | 77.1 | 60.0 | 45.0 | 63.8 |
| Vomiting | 57.1 | 72.0 | 50.0 | 60.0 |
| Joint pains | 45.7 | 36.0 | 25.0 | 37.5 |
| Diarrhea | 31.4 | 8.0 | 0.0 | 16.3 |
| Pallor | 8.6 | 0.0 | 25.0 | 10.0 |
| Confusion/coma | 14.3 | 4.0 | 10.0 | 10.0 |
| Cough | 17.1 | 0.0 | 10.0 | 10.0 |
| Dizziness | 17.1 | 4.0 | 5.0 | 10.0 |
| Jaundice (yellow eyes) | 17.1 | 4.0 | 0.0 | 8.8 |
| Dehydration | 2.9 | 8.0 | 5.0 | 5.0 |
| Other | 2.9 | 4.0 | 5.0 | 5.0 |

## 1.28 IMMUNIZATION

One of the health service packages of HEP is immunization of children and mothers along with Vitamin A supplementation. To determine practice and knowledge of HEWs on vaccination, HEWs were asked if they have ever provided vaccination service, and the schedule for each of the vaccines. About 93.8% of HEWs reported that they have provided vaccination services since their deployment to the village. There was some difference by region, where about 2.9%, 12%, and 5% of HEWs in Amhara, Oromia and SNNP have never provided vaccination services (figure 5.9). Knowledge on schedule is presented in table 5.32.

**Figure 0.9: Percent of HEWs who have ever provided vaccination since deployment**

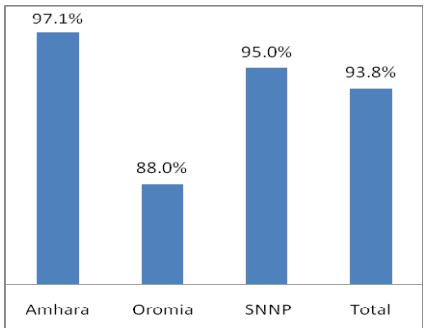
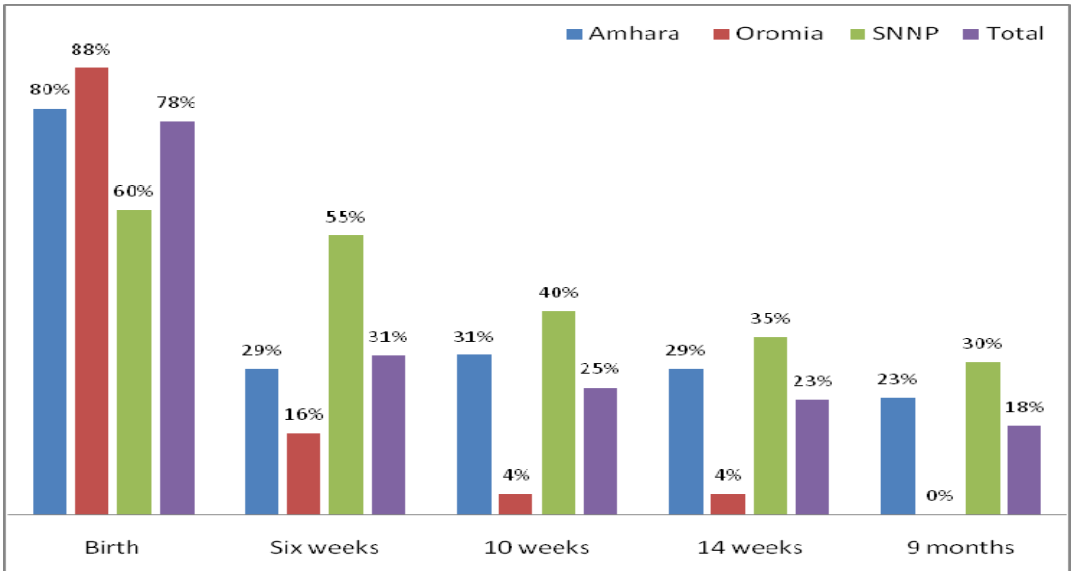


**Table 0.32: Percent of HEWs with response on the recommended ages when vaccination is given**

| Vaccine | Region | Percent of HEWs | | | | |
|---|---|---|---|---|---|---|
| | | Birth | Six weeks | 10 weeks | 14 weeks | 9 months |
| BCG | Amhara | 80.0 | 28.6 | 31.4 | 28.6 | 22.9 |
| | Oromia | 88.0 | 16.0 | 4.0 | 4.0 | 0.0 |
| | SNNP | 60.0 | 55.0 | 40.0 | 35.0 | 30.0 |
| | **Total** | **77.5** | **31.3** | **25.0** | **22.5** | **17.5** |
| DPT | Amhara | 22.9 | 94.3 | 91.4 | 91.4 | 20.0 |
| | Oromia | 0.0 | 80.0 | 56.0 | 56.0 | 8.0 |
| | SNNP | 0.0 | 85.0 | 85.0 | 85.0 | 40.0 |
| | **Total** | **10.0** | **87.5** | **78.8** | **78.8** | **21.3** |
| Polio | Amhara | 82.9 | 91.4 | 91.4 | 91.4 | 25.7 |
| | Oromia | 96.0 | 84.0 | 60.0 | 60.0 | 0.0 |
| | SNNP | 70.0 | 75.0 | 75.0 | 75.0 | 40.0 |
| | **Total** | **83.8** | **85.0** | **77.5** | **77.5** | **21.3** |
| Measles | Amhara | 14.3 | 5.7 | 5.7 | 5.7 | 88.6 |
| | Oromia | 0.0 | 0.0 | 0.0 | 0.0 | 84.0 |
| | SNNP | 0.0 | 15.0 | 15.0 | 15.0 | 95.0 |
| | **Total** | **6.3** | **6.3** | **6.3** | **6.3** | **88.8** |

**BCG:** The overall response of HEWs on the recommended ages for the administration of BCG vaccination in order of frequency were at birth (78%), at six weeks (31%), at 10 weeks (25%), at 14 weeks (23%), and at the age of 9 months (18%). Although more than three-quarters of HEWs mentioned at birth, the proportion of HEWs who also mentioned other ages was very high. The proportion of HEWs who mentioned the wrong recommended ages for BCG vaccination was particularly high in the SNNP region.

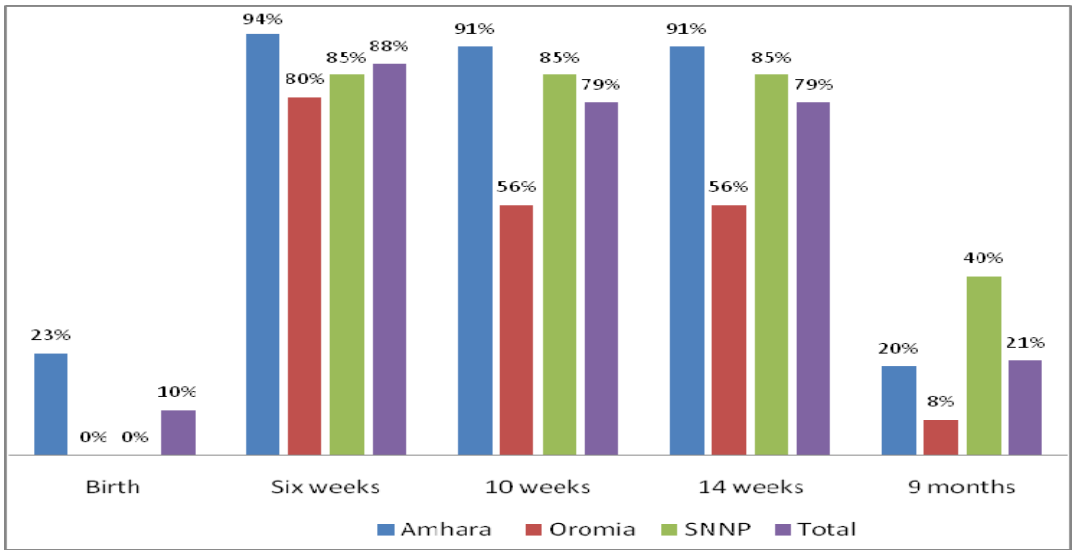
**Figure 0.10: Percent distribution of HEWs' response on the recommended ages when BCG is given**




**DPT:** The overall correct response of HEWs on the recommended ages for the administration of DPT vaccination were at six weeks (88%), at 10 weeks (79%), at 14 weeks (79%). On the other hand, about 10% and 21% of HEWS also responded incorrect recommended ages – at birth and at 9 months

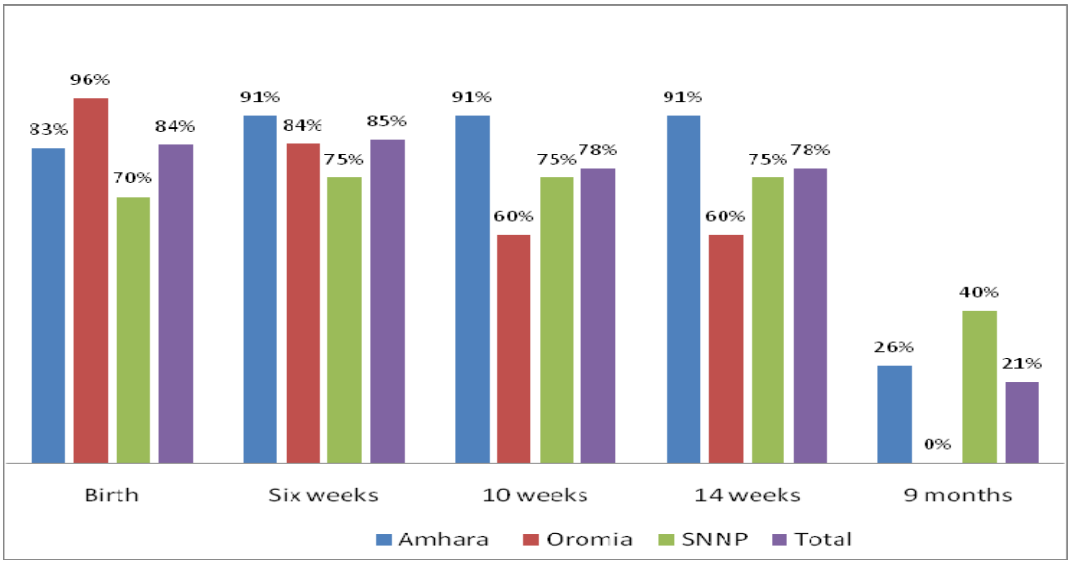
respectively. The proportion of HEWs who mentioned the wrong recommended ages for DPT vaccination was particularly high in the SNNP and Amhara regions.

**Figure 0.11: Percent distribution of HEWs' response on the recommended ages when DPT is given**



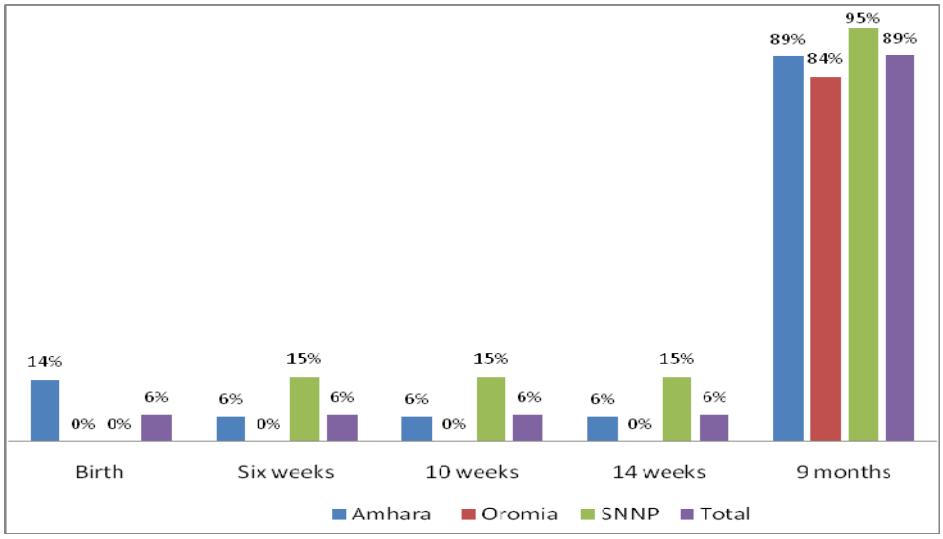

**Polio:** The overall correct response of HEWs on the recommended ages for the administration of Polio vaccination were at birth (84%), at six weeks (85%), at 10 weeks (78%), at 14 weeks (78%). On the other hand, about 21% of HEWS also responded incorrect recommended age – at 9 months. The proportion of HEWs who mentioned the wrong recommended ages for Polio vaccination was particularly high in the SNNP (40%) and Amhara (26%) regions.

**Figure 0.12: Percent distribution of HEWs' response on the recommended ages when Polio is given**



**Measles:** Overall, the proportion of HEWs who responded the correct recommended age for the administration of measles vaccination (at 9 months) was 89%. However, there were some HEWs who also mentioned at birth (6%), at six weeks (6%), at 10 weeks (6%), and at 14 weeks (6%). All of the HEWs who mentioned the wrong recommended ages for measles vaccination were from SNNP and Amhara regions.

**Figure 0.13: Percent distribution of HEWs' response on the recommended ages when Measles is given**




## 1.29 DISCUSSION

Competence encompasses knowledge, skills, abilities, and traits. It is gained in the healthcare professions through pre-service education, in-service training, and work experience. Competence is a major determinant of provider performance as represented by conformance with various clinical, non-clinical, and interpersonal standards. Measuring competence is essential for determining the ability and readiness of health workers to provide quality services and improve health outcomes. In this study core competency of HEWs in terms of selected services under the HEP which are best buys in terms of achieving the health MDGs was assessed (although HEWs need to be competent in all domains of HEP to manage programs well).

This study convincingly showed that the competence of sampled HEWs in the three regions was not conducive to the provision of skilled maternity care— from pregnancy through child birth and the post partum period. HEWs were generally in poor condition and ill-quipped to offer the continuum of essential maternity care services. The comprehensive knowledge score for identifying and managing obstetric complication was found to be below average for most of the competence questions. This means that with such result on competence of HEWs and with treatment for obstetric complications confined to the hospital level, HEP and the other components of the health system that would support the HEP are not being used rationally to maximize women's access to life-saving care. Exacerbating this problem, emergency communications and transportation systems were not available in most villages, making it difficult for HEWs to ensure that women with complications could quickly reach sites where advanced care was available.

Substantiating the findings of HEWs Competence section are the findings from the HEWs perception section. Sampled HEWs were asked to identify one HEP service area they would have preferred the refresher training to be on. The most frequently mentioned HEP service was on delivery services (44.4%).

Two-thirds (67.9%) of HEWs claimed that the type of duties and responsibilities assigned to them require more training than the training they received. The agreement of the responses of HEWs on this issue among the regions was very high. The HEP service packages, that HEWs find difficulties in terms of skills were maternal and child health and adolescent reproductive health.

## Antenatal Care

Antenatal care was provided by all facilities surveyed in the three regions; however, this study highlighted areas where interventions are needed to ensure that essential examinations and preventive measures are routinely provided to pregnant women. For example, the awareness of HEWs to mention the two most important uses of ANC (namely ensuring a woman has individualized birth plans and preparing them for birth and preventing diseases) was very low (38.8%) and this is similar across all regions. It also appears that few health extension workers are aware of all key aspects of antenatal care. This is a missed opportunity as the HEWs are the front line force of the health system which can handle the majority of antenatal clients as these gaps in knowledge are expected to hinder the HEWs to monitor pregnancy and detect problems and take needed action.

## Complications during pregnancy

While most pregnancies and births are uneventful, all pregnancies are at risk and around 15% of all pregnant women develop a potentially life-threatening complication that calls for skilled care and some will require major obstetrical interventions to survive. HEWs should be able to identify signs of the major complications of pregnancy such as vaginal bleeding, severe anemia, and severe malaria. The knowledge on identification of signs of pregnancy complications that need immediate intervention is critical for early referral by HEWs. Since such pregnancy related complications are not managed by HEWs, the only expectation from HEWS is identifications of the signs and making appropriate decisions – specifically immediate referral.

Yet this study found that a number of key indicators in identification and management of the main obstetric problems/complications were not apparent to many of the HEWs. Considerable variation in the recall of signs of pregnancy complications and appropriate measures exist both among regions and by type of pregnancy complications. Though, the criteria used to develop indicators may appear strict, the relatively low accurate responses to specify signs and actions may indicate proportionally low knowledge as the criteria include only specific signs and actions that the HEW expected to know and hence essential to saving life.

Vaginal Bleeding: The most important danger signs that health care provider should look for, in terms of maternal mortality and feotal loss reductions, when a woman presents with ante partum hemorrhage include abdominal tenderness, signs of shock, and anemia, and amount of vaginal bleeding. HEWs are also expected to know all these to take the needed measures in terms of saving lives. However, this study has shown that very few HEWs in all regions were able to recall all the important signs on a pregnant woman that presents with ante-partum bleeding at 34 weeks of gestation. Moreover, 8.8% of HEWs did not know what signs to look for. The knowledge on appropriate actions that HEWs need to take if they encounter a pregnant woman with vaginal bleeding was also found to be less impressive as only 33.8% of HEWs correctly mentioned that they would check vital signs and immediately refer to a doctor or hospital. This may be a reflection of the in services training and other performance improvement initiative.

Severe anemia in Pregnancy: An important contributor to maternal mortality is anemia during pregnancy. Since there is no laboratory service to diagnose anemia at the health post level, HEWs are expected to identify signs of severe anemia clinically during antenatal care. Although, about two-thirds of HEWs listed marked pallor as sign of severe anemia, knowledge on other signs, particularly, on shortness of breath was low. Overall, only one HEW in five had complete knowledge on the signs of severe anemia. Once HEWs suspect that a pregnant woman has severe anemia, they are expected to refer her to higher health facility, and the study showed that half of the HEWs were in position to make that decision.

Severe malaria in pregnancy: Although, HEWs have good knowledge on diagnosis of uncomplicated malaria, the knowledge on diagnosis of severe malaria in pregnancy was not satisfactory. Since severe malaria needs immediate referral, comprehensive knowledge on signs and symptoms of severe malaria is critical.

### Intra-partum Care

The ability and readiness of health extension workers to provide quality intra-partum care and services is found to be an important area for improvement. Only thirty two percent of HEWs had assisted a woman at a birth within the last month, while 11.3% and 8.8 % assisted delivery in the past six and more than six months ago respectively. Overall, 26.3% of HEWs have never attended and assisted a woman during delivery (about a quarter of HEWs in SNNP and Oromia regions). Significantly high number of HEWs did not know all the cardinal signs of labor. Although, the overall proportion of HEWs with complete knowledge of establishing labor was low in all three regions, the situation was worst in Oromia and SNNP regions. Monitoring during labor is important to assess the progress and identify problems such as obstructed labor and eclampsia. Monitoring on important set of observations is critical to identify problems for early referral; however, the study showed that none of the HEWs (only 1.3%) had comprehensive knowledge on the key observations that should be made during labor. WHO recommends the use of partograph to record the observations during the monitoring of active labor, and HEWs were trained to employ partograph during delivery to facilitate recording and interpreting of signs of maternal and fetal well being. However, only about a quarter of HEWs use partograph. It could enable the HEWs to detect complicated labor early.

The commonest life threatening complications during labor include obstructed labor, eclampsia, bleeding after delivery, retained placenta, and infections. The knowledge on key signs and symptoms to diagnose these complications is critical for early referral and management. HEWs are expected to identify these complications and take appropriate measures. However, the level of comprehensive knowledge on identification of these complications and taking appropriate measures was generally low among the sample HEWs.

### Newborn Care

The guideline on family health for HEWs states that immediately after delivery, HEWs should provide life-saving care of newborns such as wiping the face after birth of head, ensuring the baby is breathing, clearing the airways of blood and mucus, cord care, drying and wrapping the newborn in a warm clean clothing and assisting breathing with ambu bag. They are also equipped with the skills to handle low-birth weight newborns to ensure thermal protection.

Yet this study found a number of key indicators that deserve improvement in the immediate care of the newborn by HEWs. Although there are variations in responses to individual questions pertaining to

immediate care given to newborn, the proportion of sampled HEWs with comprehensive knowledge was only 10.2%. Wide variation among regions in the proportion of sampled HEWs with comprehensive knowledge was documented. The immediate care given to newborn is critical in saving life. To reach MDG4, there must be a strategic focus to reduce newborn deaths as nearly 40% of deaths among under-five years occur in the newborn period. To attain this goal, competent health provider is necessary, but other systemic barriers should also be addressed effectively. This is because a provider can have the knowledge and skill, but use it poorly because of individual factors (abilities, traits, goals, values, inertia, etc.) or external factors (unavailability of drugs, equipment, organizational support, etc.).

### Child care

Knowledge of HEWs on IMCI is moderate. Majority of HEWs were able to mention what to do with respect to checking the child for cough, diarrhea and fever, and for danger signs. Integrating vaccination services, nutritional counseling and growth monitoring were only considered by about a quarter of HEWs. There is still a lot to go in the implementation of IMCI which entails solving the all round problems of a child. The level of knowledge on danger signs was also moderate with about half of HEWs mentioning at least two danger signs.

Seriously sick children with severe pneumonia require medicine (antibiotics), which is not provided at the health post level. In order for HEWs to immediately refer a child with ARI, they are expected to identify the key indicative signs. The proportion of HEWs that have identified fast breathing and lower chest in drawing were 59% and 49%, respectively, which seems low. On the other hand, the level of knowledge in the management of children with diarrhea was satisfactory, although it would still need improvement.

### Family Planning (FP) Knowledge

Information from reproductive health (RH) Guidelines on providing quality FP service was compared to HEWs' knowledge base. The knowledge on family planning counseling was moderate. About half of HEWs mentioned they will provide information (a) about all methods of family planning, (b) on the benefits of various family planning methods, and (c) about risk of methods, (d) about effectiveness of methods. Based on the RH Guidelines, it appears that large proportion (between 40-56.2%) of HEWs did not have a comprehensive knowledge on counseling for family planning. Lack of adequate counseling on the choices of methods, benefits and risks, and effectiveness of the different limiting and spacing methods of contraception may become a barrier significantly contributing to the low contraception access and utilization.

### Malaria

Malaria is one of the major health problems in Ethiopia. Recognizing that malaria cases should be treated promptly with effective anti-malarial drugs, the government incorporated treatment of uncomplicated malaria cases at the health post level. To undertake appropriate management of malaria cases, HEWs were trained to diagnose and treat patients with uncomplicated malaria. Fifty percent or more of the HEWs had a score of 70% for malaria history taking/meaning for symptoms of malaria. The weaknesses observed were in the areas of asking about treatment before coming to clinic (40%), exploring other possibility of fever (20%) and vomiting (50%). Physical examination/signs competence for malaria (examination for anemia, jaundice and temperature) was the lowest indicating that these areas need to be stressed to improve quality malaria diagnosis.

### Immunization

The recommended standard for routine immunization schedule in Ethiopia is set as follows: BCG -At birth; DPT- 6, 10, 14 weeks; OPV - At birth, 6, 10, 14 weeks; Measles 9 months. This schedule is set to improve outcome in terms of child health by combating the major childhood killer and yet preventable communicable diseases. Although 93.8% of HEWs surveyed reported they have provided vaccination services since their deployment to the villages in the three regions, a significant proportion of HEWs were found to lack the knowledge of the recommended age administration for BCG, DPT, Polio and Measles. The proportion of HEWs who mentioned the wrong age for the different vaccines was particularly high for SNNP followed by Amhara and then by Oromia. This suggests that important opportunities to promote child health and achieve MDG4 are being missed.

## 1.30 RECOMMENDATIONS

In any health promotion and disease prevention program foremost, implementation support prepares implementers to conduct an intervention successfully. Indicators of implementer readiness to implement an intervention successfully include whether they have both adequate skills to carry out the intervention and sufficient knowledge about the theoretical basis of the intervention, feel positive about a program, value what it contributes to the health system, and are committed to its goals. If a HEW does not see the value of providing certain health services or fostering a specific skill or conducting health education about particular topics, she may be more likely to skip those services/ health education lessons, even though they may be core parts of the program. Implementers also need to believe that both the intervention and their role in its delivery will be effective. HEW confidence in the effectiveness of an intervention and in their own knowledge and skills affects the ability to deliver a program successfully. The more confident and comfortable they feel when providing certain health services or conducting health education lessons about a particular topic, the more likely they are to deliver or cover those lessons that are a necessary part of the program.

Based on the findings of our study competency based in-service and/or pre-service training are necessary to provide evidence-based knowledge and skills. To address the key knowledge and skills gaps in the HEP services illuminated by our survey in terms of identifying the signs and mentioning the management methods, training of HEWs around core competencies will yield a ‘safe HEW’ more quickly than traditional methods. This is also conditional on the quality and context of training. Training around core competencies will be a quicker way of attaining a safe practitioner. Important dimensions of the implementation support system for HEP is the technical support provided. This support includes the structure, content, and timing of the training, around core competencies and any ongoing support required to deliver the HEP successfully. It also includes the implementation monitoring system or additional technical assistance materials provided by the program.

Supportive Supervision should be comprehensive and should prepare the HEWs to deliver the HEP services. Therefore, the content of the technical supervisory support should include the essential elements of the HEP interventions. Any attempt to evaluate HEP should verify that these elements are included and covered in the technical support to HEP. There is also a need for redesigning the timing of technical support in terms of the structure, frequency, duration, and pace at which the technical support and follow-up should be administered.

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