Addis Ababa University

College of health science, School of Public Health

Assessment of Functionality and competence of health extension workers in East Shoa zone, Oromia regional state.

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Abbreviations

ANC-Antenatal care.

AOR –Adjusted odd ratio

COR –Crude odd ratio.

CNHDE-Center for national health development in Ethiopia

IEC-information education and communication

FMOH – Federal ministry of health.

HEP- Health extension program.

HEWs –Health extension workers.

HP - Health post

HSDP - Health sector developments program two.

MDGs-Millinium development goals.

NGOs-Non governmental organizations

ORS- Oral rehaydertion salt.

PNC-Postnatal care.

SPSS-Statistical package for social science

SRS-Simple random sampling

TBAs –Traditional birth attendants.

TTBA-Trained traditional birth attendants

TVET –Technical and vocational education training.

UNICEF-United nation children's fund

WHO-World health organization

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Abstract

Back ground-Health Extension Program (HEP) is innovative community based program. The aim of the program is to improve access to basic essential health service in severely under served rural and remote communities with the goal of achieving universal primary health care. There are some studies on HEP; most of them are evaluation of the program and its implementation process. This study on its side focus on assessing extent of Health Extension Workers functionality and its determinants again this study is the pioneer to address the issues of Health Extension workers competence.

Objectives: The study was designed to assess Health extension workers level of functionality and competence on family health package components of health extension program in East Shoa zone of Oromia region.

Methodology: A cross sectional study was conducted from January2010 –April2010. In the study 381 HEWs were participated in the functionality assessment after this functionality assessment 42 Health Extension Workers were selected by simple random sampling from functional HEWs and observed during their performance of Ante natal care(ANC),post natal care(PNC) and delivery and new born care to study their competence by using observational checklist and written examination. Logistic regression was used to identify factors associated with Health Extension workers functionality.

Result: Functionality- Overall prevalence of HEWs functionality on family health package was 92.9%. 98.2% of HEWs were functional on family planning service while only 43% of them on delivery and new born care. Supervision (p-value, 0.015), and refresher training (p-value0.016) was found highly associated factors with functionality of HEWs. In school training on family health package lacks both theoretical and practical training.

Competence- HEWs were more competent on PNC (78.6%) followed by ANC (76.2%) and delivery and new born care (66.7%).HEWs were highly competent on interpersonal and routine activity than technical skill during performing the activities. Health Extension Workers (HEWs) scored more on theoretical knowledge (written examination) than practical skill (observation) in case of ANC& delivery and new born care but in PNC the reverse. Stretcher and examination beds were found scarce equipment while contraceptives were highly supplied drugs to health posts.

Conclusions and recommendation

Generally level of functionality of HEWs were encouraging in all service under family health package except delivery service, again competence level of HEWs was satisfactory on ANC and PNC but delivery service need especial attention to maximize their competence and functionality. The program need attention at school training level and also in service refresher trainings, on job supervision and timely supply of recommended medical equipments and supplies are mandatory for HEWs functionality and competence.

1.0 Introduction

1.1 Background

Ethiopia is a poor country with weak health care systems and infrastructure. The government is the main health care provider in Ethiopia but the coverage and distribution of its health facilities among regions remains uneven to overcome this problem government designed different policies and strategies. Ethiopia had adopted Primary Health Care (PHC) as the national strategy to achieve equitable access to health services by all people of the country as early as late 1970. Strengthening primary health care and innovative community based health service delivery systems helps to provide more equitable access to health services. It is, however, seeking to address inequities in health service delivery through its Health Extension Program (HEP). This program aims to improve access to basic essential health services in severely under-served rural and remote communities, with the goal of achieving universal Primary health care by 2009 (1, 2). The main objectives of the program are to improve the utilization health service by peripheral community through HEWs and reducing maternal and child mortality(3).

HEWs need one year training at technical and vocational education training (TVET) centers. The training is composed of theory, project work and apparent ship programs**.** Two health extension workers are assigned to one health post to serve 5000 peoples by implementing 16 health extension packages. HEWs spend 75 % of their time visiting families in their homes and performing outreach activities in the community. The remaining 25 % is spent providing services at the health posts, including immunizations and inject able contraceptives, among others (4-6)

To enhance health sector development program (HSDP), one of the main priority areas have been on the training and deployment of HEWs, it was planned to train 7500 HEWs each year. About 24,571 HEWs were trained by year 2008, the target plan is 30,000 HEWs by the year 2009 (7).

1.2 Statement of the Problem

Competence is one of the determinants of performance even though their relationship is complex. Obviously, less competent providers are less likely to provide quality services, and health care providers must have the competencies necessary to perform their jobs according to standards in order to provide quality services for improving competency would improve performance(8). Appropriate skill training is mandatory for once competence some assessments on HEWs shows the curriculum and the modules for HEWs training had missed some interventions that are useful for child survival and maternal health moreover the curriculum focused more on theory than practical skill which they are expected to implement latter (9). Study in East Gojjam disclosed that one year training was inadequate (10).

Study done in Wolayita on factors determining the implementation of HEP shows among who gave birth only 3% of the mothers were assisted by health extension workers, where as majority (90%) gave birth assisted by their unskilled neighbor and the rest 7% gave birth at hospital, health center, and by traditional birth attendants (11).No delivery service by HEWs was reported in the study woredas of Amharra region even though a number of health posts (HPs) have delivery kits and couches. HEWs did not undertake immunization service independently during study period in Tigray region (12). The intention of this study is to assess functionality and competence of HEWs on the family health package which is one of the major 16 health extension packages.

2.0 Literature Review

Health extension program (HEP) focuses mainly on providing quality promotive, preventive and selected curative health care services in an accessible and equitable manner to reach all segments of the population, with special attention to mothers and children. The policy has a particular emphasis on establishing an effective and responsive health delivery system for those who live in rural areas. The philosophy of HEP is that if the right knowledge and skill is transferred to households they can take responsibility for producing and maintaining their own health. The HEP is the main vehicle for bringing key maternal, neonatal and child health interventions to the community (3).

2.1 Training and Selection Pattern.

Duration of training for community health workers vary from country to country experience from Kenya shows training for health extension personnel ranges from 1to 3years(13). Training Health Extension Program in Ethiopia started in 2003 (HSDP II), to fill the shortage of man power in the grass root level. The training program requires one year.The training course is designed to be practical (70%). Core courses were given in a modular format to enable students to gain a particular set of skills, which may form the basis for ongoing skill development. There were also common and supportive Courses geared toward their future career development. The whole training program of a year is made up of 1392 hours. These hours are supposed to be covered within 48 consecutive weeks, which in turn is allotted for Main, supportive and common courses (33 wks), Project work (3 wks), Evaluation and examination (4 wks), Apprenticeship (8 wks) (6). Forty TVET schools provide training to HEWs, and 140 TVET tutors have been trained to deliver pre-service training (3).

According to the assessment done in 2005 on first intake HEWs, the curriculum prescribed 70% practical training but, in almost all cases, there were no facilities (demonstration room or models, health services nearby etc) available; therefore nearly all the courses were 95% theory. Lack of reference material by the local language and adequacy was also another challenge; the HEWs training modules were the only reference materials available at the HP level even not for all packages. Supervision and responsibilities were not clearly defined and therefore the trainees did not have enough exposure to procedures they were supposed to carry out (4, 14).

2.2 Refresher Training

Literature reflects a great diversity of approaches, location, organization and length of training, there is agreement on one matter: that continuing or refresher training is as important as initial training. A number of studies have found that if regular refresher training is not available, acquired skill and knowledge are quickly lost. On the other hand, good continuing training may be more important than who is selected initially (15). Study done in East Gojjam, Ethiopia in 2008 shows 29.8% of HEWs had not ever been given refresher training while the study shows association with competency and functionality (10).

2.3 Selection Pattern

The academic background and training of community health workers vary widely in different regions. According to the World Health Organization community health workers should have a level of basic education that enables them to read, write, and do simple mathematical calculations (16). HEWs entry criteria's in Ethiopia are being female, age, ≥ 18 years, above10th grade complete with GPA of 1.2 and residents of specific communities. Trainee selection was carried out primarily by the Woreda committee chaired by capacity building with the woreda health offices and woreda education office as members. There was no medical checkup during recruitment; consequently there are a number of handicapped and pregnant women (4).

2.4 Health Institution Support

Equipments and Supply

Health Posts must be adequately provided with equipment, materials and supplies required to deliver the different packages of essential services to the community and to provide quality health services. Some of the Health Posts are not fully furnished with the necessary equipment and Supplies. From assessment done 2007, for 18 health posts found in Oromia there were only 8 delivery kits, 11 child scale and 6 refrigerators. Even some health post in Benshangul Gumuz (Akuda) had no supply at all. Where there were supplies, some major items/drugs may be missing like contraceptives, and anti malaria in some of the regions (12).

Contraceptives were highly supplied drugs and Ergometrine was least supplied drug. From different studies delivery kits are least supplied equipment. Even in the presence of the supply HEWs did not use it because they don't feel competent to use them (10, 12, 17).

Another study done in Wolaiyta, Ethiopia shows, 97% of HEWs mentioned that they had the recommended type of family planning drugs, and about 25% of Health Extension Workers stated that they had no drugs and kits recommended for their health posts. Nearly 40% of HEWs mentioned the absence of glove and antiseptics in their respective health posts, and more than half 53% of HEWs reported that, both adult and child weight scale were not available in Health Posts, and 93.7% had no megaphone for their health education activities(11).In terms of equipping the Health Posts, none of the regions has reached the target set for 2007/8.The plan was to equip 10,773 HP but the performance shows only 2,664 health posts supplied with medical kits (7).

2.5 Supportive Supervision

Supportive supervision enhances capacity and helps to correct any constraints encountered in the implementation of the HEP. Effective supervision requires a team of experts with an appropriate mix of skills. The supervisory team composed of different discipline at all organizational level.

At each level the supervisory team prepares its own annual plan, checklists and detailed schedule for each supervisory visit (3). Ministry of Health is currently training 3200 supervisor for the deployment in HEP (7). According to assessment done on working conditions of HEWs in Ethiopia only 50% of them had three or more monitoring and supervision but other study in east Gojjam the majority (84.5%) had supervision at least once a year, mostly supervised every month by health center team. Supervisors mostly checked records (77%), checked stocks (65%), discussed work plan (58%), discussed work conditions and gave oral feedback (81%) but none gave written feedback (12). Regarding referral system some Health Extension Workers refers their patient to the nearest health center, majority of them did not get feedback for their referral (10, 17).

2.6 Core Responsibility and Competency

Competence encompasses knowledge, skills, abilities, and traits. It is gained in the healthcare professions through pre-service education, in-service training, and work experience. Survey conducted in Burkinafaso to assess maternal and child health service by professionals shows presence of HP did not increase utilization of the service, the main reason was the quality of service provided there (18).

Another assessment done in Sirlanka on public health midwife shows knowledge of specific content does not correlate with competence, again Knowledge of antenatal care was better than delivery care and postnatal care. Deterioration of knowledge with increasing duration of service and age was seen from the study (19). Cross sectional assessment done in south west Nigeria among health care workers on knowledge and utilization of partograph shows the use of partograph was reported more by tertiary health care workers and knowledge and perception toward the benefit of partograph also shows same trend (20).

Health Extension Workers in Ethiopia are responsible for 16 health extension service packages. The highest proportion of their time is spent on health education more than 50% followed by environmental health. Very little time is used for family health and other activities. Assessments done in East Gojjam shows, 96% of HEWs were functional in the study area. According to functionality assessment on family health packages in the area family planning was the most performed activity (93.7%) followed by immunization service(91.9%), delivery was least provided service (66.3%) (10, 12).

A study conducted in Welkiat, Tigray on community perspective on HEWs shows the importance of HEWs reported by community was 58% very helpful while 3.3%doesnot make much difference. Concerning their knowledge indicated that 58% very good,18%medium and 5% poor.93% of respondents' prefer HEWs to assist them during labour than TBA, the reasons mentioned were that they are more knowledgeable than TBA &absence of TBA from area(21).

2.7 Working conditions

A study on the working condition of HEWs indicated that 81% were at more than10km from the woreda health offices and 63% are at more than 10km from the HC. HEWs have been assigned in number of cases in Kebeles with no Health Post ,Some Kebeles had no living house for HEWs and some were far from the HP. Living areas for majority of HEWs had no services like telephone and transportation (12)

3.0 Objective of the Study

3.1 General Objective

To assess Health Extension Workers (HEWs) functionality and competence on Family Health Package components of Health Extension Program in East Shoa zone of Oromia Region.

3.2 Specific Objectives

1. To assess level of functionality of Health Extension Workers (HEWs) on Family Health Package services in East Shoa Zone.
2. To identify determinant factors for HEWs functionality on family health package in East Shoa Zone.
3. To assess level of competence of Health Extension Workers (HEWs) on maternal health care services provision in East Shoa Zone.

4.0 Methods and Materials

4.1 Study Area

The study was conducted in East Shoa Zone, Oromia region. East Shoa Zone is one of 18 zones in the region. Adama is the capital of the Zone which is located 100km from the capital of the country and region Addis Ababa. East Shoa Zone has 10 rural woreds which consist of 304 kebeles. The Zone has 608 Health Extension Workers (HEWs).

4.2 Study Design and Period

Descriptive cross sectional study design was used.

The study was conducted from January 2010- April 2010.

6.3 Source Population

All Health Extension Workers (HEWs) found in the East Shoa Zone.

4.4 Study Population

Functionality assessment – All health extension workers (HEWs) from selected kebeles.

Competence Assessment– Selected functional Health Extension Workers after preliminary functionality assessment.

Inclusion Criteria – For functionality assessment, those HEWs who were working at least for one year.

Competence assessment- HEWs who participate in the functionality assessment and became functional.

Exclusion Criteria –Functionality assessment, HEWs who had service year less than one year and other non HEWs professionals in the health posts.

Competence Assessment- Non Functional HEWs after preliminary assessment.

4.5 Sampling Methods

Probability sampling method.

4.6 Sample Size Determination

Sample size is calculated using a formula for single population proportion. The proportion of functionality of health extension workers is not known previously so assuming (p) 50% and margin of error(d) 0.05 with confidence interval of 95% (z=1.96) and non response rate of 10% of the sample size. The source population was 608.

$$\mathbf{n} = \frac{\left(Z\frac{\alpha}{2}\right)^2 p(1-p)}{d^2} = \mathbf{235}$$

, it became 235 +10%=259 HEWs.

Design effect =1.5 *259 =389 HEWs.

Total expected sample size for functionality assessment will be 389 HEWs and for competence assessment 10% of the functional HEWs after functionality assessment were taken.

4.7 Sampling Procedures

Multi stage sampling method was used. The procedure for sampling was as follows;

East Shoa Zone is purposely selected because the Zone fulfill two Health Extension Workers Per kebeles, then selecting 6 woredas using SRS technique from 10 rural woredas found in the Zone, using proportionate allocation method for each selected woredas to get 389 HEWs. First phase of the study assessed functionality of all sampled HEWs then after analyzing the first assessment, sampling 10% of functional Health Extension Workers to assess for competence by using SRS method. The reason for taking only 10% of Functional Health Extension Workers for competence is, the method used for assessment of competence was observational so it needs more time and cost so only 10% of functional HEWs were selected.

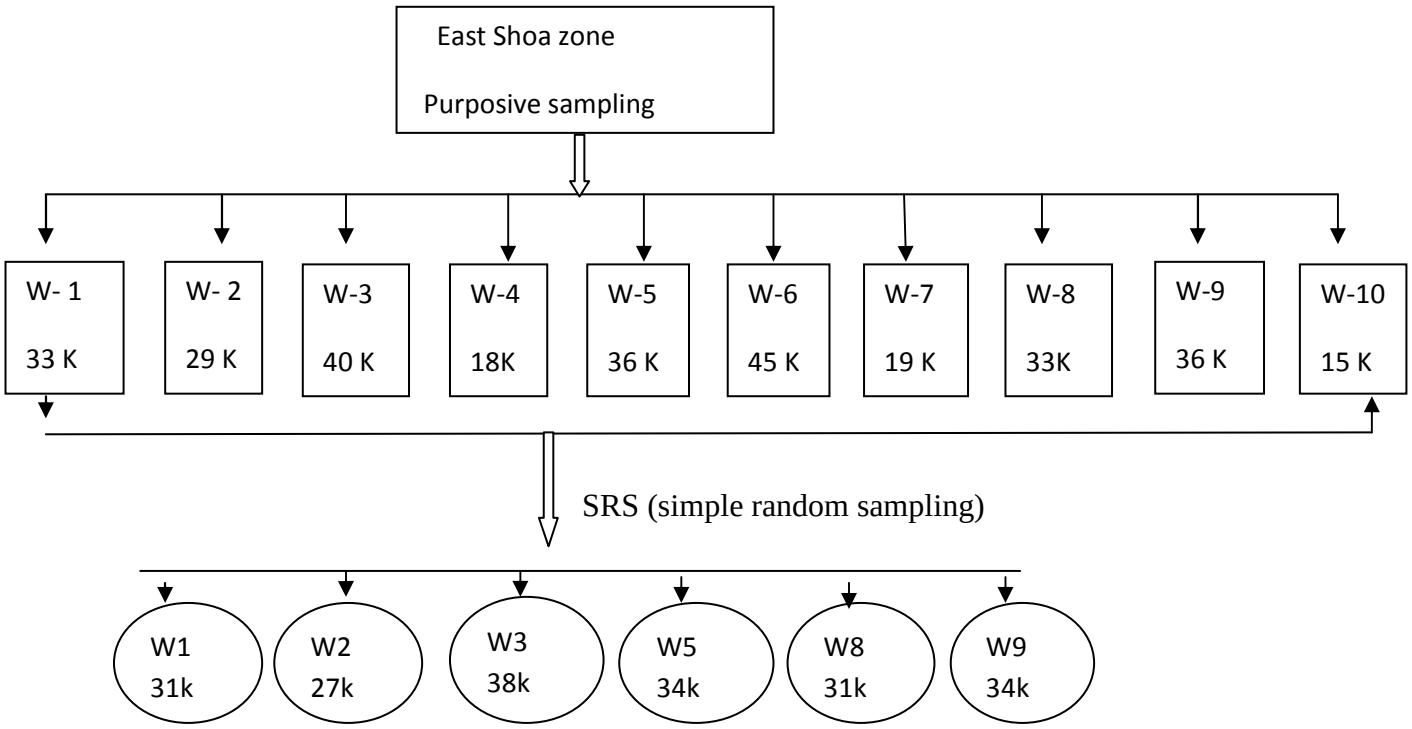


fig.1 .Schematic representation of sampling procedure

By using proportionate allocation sampling technique, 195 kebeles was selected.

P (n) =$\frac{n}{N}$, = 0.94

Key; W =woreda

K =kebele

NB. Woredas which written in bold are study sites.

W -1 **Adama** w-6 Dugda

W-2 **Adea** w-7 Fentale

W-3 **Adami tullu** w-**8 Gimbichu**

W-4 Bora w-9 **Lume**

W-5 **Boset** w-10 Liban

4.8 Data Collection Method

Quantitative data were collected.

Functionality assessment.

Quantitative –Self administered questionner was prepared for HEWs which are selected for functionality assessment (389 HEWs). The questionner was designed in English then translated into Afan Oromo and administered to those selected HEWs. The entire functionality assessment participants were given special code cards which help to identify for second phase competence assessment. Data collection was done by 10+3 nursing students.

Competence Assessment

Observational checklist was used to assess Health Extension Workers competence on maternal health care when they provide service to their client during study period and to assess equipments in health posts. Checklist basis job description defined by Ministry of Health and predefined clinical practice standard on maternal health care services delivery for Health professional. Data collection for Competence Assessment was done by Bsc Nurses who have experience in supervising HEWs.

Written Exam was prepared to assess basic knowledge on maternal health to complement observational assessment in assessing their competence. The exam consists of 30 questions in the form of MCQ and T/F.

4.9 Operational definition

- ✓ **Maternal Health Care –**Maternal health care services like Antenatal Care (ANC), Postnatal Care (PNC) and delivery and new born care.
- ✓ **Non-Functional**-If individual HEW functionality score less than or equal to 50 % (≤ 50%) of the activities among the job descriptions under family health package within the last three months.
- ✓ **Functional**. -If individual HEW functional score more than 50% of the activities among the job descriptions under family health package within the last three months.
- ✓ **Competent-**if individual HEW can score more than 50% for predefined standard procedures of each respective activity.
- ✓ **Not competent** –if individual HEW score ≤ 50% of predefined standard procedures for each respective activity.

4.10. Data analysis plan - After data collection was completed and checked for completeness, the data entry and cleaning was done by Epi info version 3.6 and exported to SPSS version 11 for statistical analysis. Descriptive statistics and logistic or multivariate analysis was applied to describe the association between the independent and outcome variable.

4.11. Data quality assurance- questionnaire was pre tested on HEWs of neighboring zone. Questionnaire was checked for completeness on daily basis by immediate supervisors. Checklist use standard baseline from FMOH.

4.12 Method of Measuring Functionality

Based on experience from different studies on level of functionality the scale of measurement is designed for this study(10). The activities are measured within the three months preceding the survey to avoid recall bias.

Table 1. Functionality scoring system of activities under family health package of HEWs in East Shoa Zone, Oromia regional state, 2010.

s.no	Activities	Scoring system	
		No	Yes
1	Family planning	0	1
2	Ante natal care	0	1
3	Postnatal care	0	1
4	Delivery service	0	1
5	Essential nutrition	0	1
6	Immunization	0	1
7	Growth monitoring	0	1
8	Adolescent reproductive health	0	1
9	Child hood illness treatment	0	1
10	Referring patients	0	1
11	Total score	0	10

Key -Yes =Perform the activity in the 3 months.

No =Not perform the activity in the 3 months

Maximum score =10

Functional –Those HEWs who score more than 5 (50%)

Non functional –Those HEWs who score ≤ 5.

4.13 Method of measuring Competence

Competence was assessed by using observational checklist and written exam. Competence level classified into two categories (competent and not competent) based on studies operational definition for each classification.

4.14 Ethical Consideration

The ethical approval and clearance was obtained from Addis Ababa University Faculty of Medicine Institutional Review Board (IRB) and again letter of permission was obtained from, Oromia Regional Health Bureau, Zonal Health Department and respective woreda health offices. Before data collection data collector requested for study participants consent. The confidentiality of the information obtained from study subjects was assured for study group and identification of participants was not requested but there was coding system for functionality assessment. For observational assessment professional ethics was maintained by keeping important privacy during each activity and observers had responsibility to help HEWs. Each participant not obliged to participate in the study; non volunteers were omitted.

5.0 Result

5.1 Part I- Functionality assessment
Descriptive statistics

I Socio demographic characteristics of HEWs

This study was done in six woredas of East Shoa zone, Oromia region. Total HEWs participated in this study were 381 but the total sample was 389 so the response rate was 97.9%.Table.2.presents socio demographic characteristics of HEWs. The mean (±SD) age of HEWs participated in the study were 21.43(±1.8) years (minimum=19 years and maximum=28 years).More than 55% of HEWs were orthodox and about 22% were Muslim by their religion. Majority of HEWs (74.8%) were single while 25.2% were married. 91.3% of HEWs were recruited from grade10 and 8.7% from grade 12. Majority (67.5%) of HEWs serve for two and less than two years as HEW. Only 2.1% of HEWs reported physical disability. The mean population numbers they serve in the kebele was 3212.32.The maximum population number in the kebele was 8795 while minimum number was1013. 74.8% of health posts were located greater than 10km from woreda health office. Majority of health posts (58.3%) are located greater than 10km from nearby health center.

Table 2. Socio demographic characteristics of HEWs in East Shoa zone, Oromia Region, 2010.

n=381

Variables	Frequency	Percent (%)
Age		
15-19	42	11
20-24	319	83.7
25+	20	5.2
Religion		
Orthodox	211	55.4
Muslim	85	22.3
Protestant	76	19.9
Other	9	2.4
Marital status		
single	284	74.8
Married	96	25.2
Educational status		
10+1	348	91.3
12+1	33	8.7
Service year as HEW		
≤ 2 years	257	67.5
≥ 3 years	124	32.5
Current disability		
No	373	97.9
Yes	8	2.1
Distance of HP from woreda		
>10km	285	74.8
≤ 10km	96	25.2
Distance of HP from HC		
>10km	222	58.3
≤ 10km	159	41.7

II health institution and administrative support

82.4% of HEWs were received refresher training in the past year before this survey. From these 52.5% receive≤ 2 times while 29.9% receive> 2 times. 85.5% and 78.5% of HEWs have been supervised by health center team and woreda supervision team a year before this survey respectively. Out of these 46.2% receive ≤ 3times and 39.1% > 3times in the year from HC supervision team while40.2% receive≤ 2 times and 38.3% >2times by woreda supervision team. Regarding reference material 57.2% of HEWs have reference materials for their work partially while 9.7% didn't have any reference materials.

42.8% of HEWs had got all the recommended drugs. The most supplied type of drugs were vaccination (82.7%) followed by contraception (78.2%). 36% of HEWs reported that they did not supplied with recommended medical equipments yet. With respect to HEWs living house only 46.2% of them have house in the health post.

Table 3 Health institution and administrative support for HEWs in East Shoa Zone, Oromia Region, 2010 n=381

Variables	Frequency	Percent (%)
Refresher training		
Yes	314	82.4
No	67	17.6
Supervision by HC team		
Yes	325	85.3
No	56	14.7
Supervision by woreda team		
Yes	299	78.5
No	82	21.5
Reference material		
Yes	126	33.1
partially	218	57.2
No	37	9.7
Drugs supplied in the year		
Yes	163	42.8
Partially	202	53
No	16	4.2
Equipments		
Yes	244	64
No	137	36
Living house in the HP		
Yes	176	46.2
No	205	53.8

III Assessment of school training on family health package

Regarding the adequacy of school training on family health, 60.4% of HEWs reported that it is partially adequate while only 2.6% reported inadequate at all.30.4% reported that practical training in the school was not adequate while 30.2% reported it lacks both practical and theory training . Only 0.8% report there is shortage of training time (hours).

58.8% of HEWs reported the training center was partially fit for training only 7.1% of HEWs respond it is not completely fit for training. Major deficits reported in training center were 45.9% reported there was no demonstration room, 27.6% no library and 26.8% reported no adequate staff in the training centers. 59.6% of HEWs reported their trainers were competent only 2.9% reported they are not competent. From those who report not competent and partially competent 19.4% revealed that trainers lack both practical skill and theoretical knowledge followed by17.8% revealed they only lack practical and 2.9% revealed lack only theoretical knowledge.

Table 4. Assessment of school training in East Shoa Zone, Oromia Region, 2010.

n=381

Variables	Frequency	Percent (%)
Adequacy of in school training on family health package		
No	**10**	**2.6**
Partially	**230**	**60.4**
Yes	**141**	**37**
Fitness of training center(school)		
No	**27**	**7.1**
Partially	**224**	**58.8**
Yes	**130**	**34.1**
Trainers competence		
Not competent	**11**	**2.9**
Partially competent	**143**	**37.5**
	227	**59.6**

IV Functionality assessment

Among 381 HEWs selected form East Shoa zone 354(92.9%) were found to be functional based on functionality scoring system (if they respond “yes” for greater than50% of the activities asked under family health package). Among the ten selected activities under family health package family planning was the highest performed activity (98.2%) while delivery and new born was the least performed activity (43%).

Table .5 HEWs performance on each activity under family health package in East Shoa Zone, Oromia Region, 2010. n=381

S.no	Activities	Frequency(Percent)	
		Yes	No
1	Ante natal care	333 (87.4)	48 (12.6)
2	Delivery& new born care	164 (43)	217(57)
3	Immunization	372 (97.6)	9 (2.4)
4	Post natal care	339 (89)	42 (11)
5	Adolescent reproductive health	341 (89.5)	40 (10.5)
6	Essential nutrition	276 (72.4)	105(27.6)
7	Growth monitoring	326 (85.6)	55 (14.4)
8	Family planning	374 (98.2)	7 (1,8)
9	Treating child hood illness	312 (81.9)	69 (18.1)
10	Referring patients	251 (65.9)	130(34.1)

n=381

ANC –Among 381 HEWs who filled the questioner 333(87.4%) of them respond that they perform ANC in the three months preceding the survey. Only 48(12.6%) of them does not perform this activity. From those who perform ANC most dominant activities were giving TT immunization (86.4%), counseling and giving some health information (85%) and giving curative services (71.9%).

Delivery and new born-Delivery was performed only by 164 (43%) of HEWs three months preceding survey. From these 32% of the service is delivered at home only 3.1% and 7.9% performed at health post and both HP and home respectively.

Immunization –All most all (97.6%) of HEWs gave immunization service 92.7% of these activity was given for both mothers and children in the last three months before survey.

PNC-About 89% of HEWs were responding that they perform this activity in the last 3months. Among PNC counseling and education about 85% of them focus on exclusive breast feeding and family planning method issue to space the next pregnancy. Small proportion 11% did not give PNC service.

Family planning –All most all (98.2%) HEWs gave family planning services. Among these about 97.1% gave Depo-Provera, 95.5% OCP, 83.7% condom and small proportion (1%) gave implantation.

Childhood illness-About 89% of HEWs were gave service of treating childhood illness in the last three months preceding this survey. Diarrhea (58.3%) was most treated childhood illness followed by malaria and intestinal helimentiasis.

Adolescent reproductive health-Only 10.5% of HEWs did not provide adolescent reproductive health in the last three months before survey. Among those who gave ARH services majority of them provide counseling on HIV/AIDS (88.2%) and teaching on HTP (85.8%) while only 77.4% provide condom for adolescents.

Referral -65.9% of HEWs reported that they gave referral service for different cases. Among the cases referred 50.1% was childhood illness followed by for delivery service (32.8%) and 11.5% referred for PMTCT and TB cases.

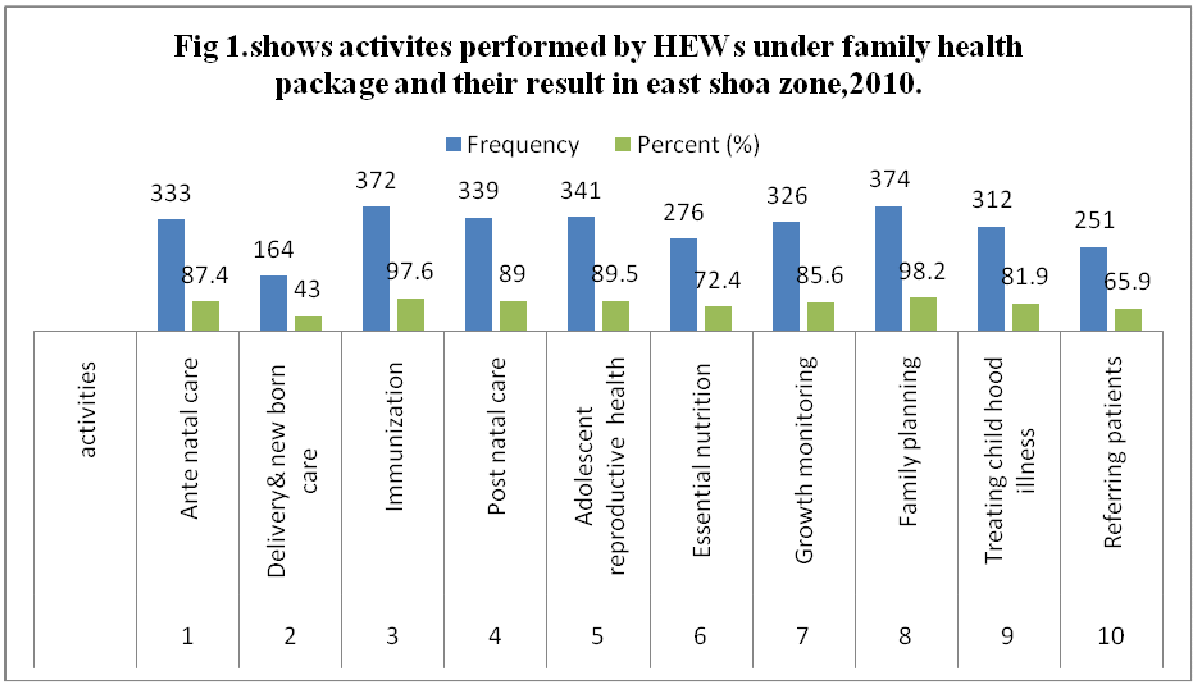


Table. 6 Estimated parameters and covariates for a multiple regression model that relates Various supporting factors for HEWs functionality in East Shoa Zone Oromia Region, 2010.

variables	COR(95% CI)	AOR(95%CI)	p-values
Refresher training in the year			
yes	4.34(1.93,9.79)	3.17(1.24,8.09)	0.016
no	1.00	1.00	
Supervision by HC team in the year			
yes	3.94(1.7,9.13)	1.89(0.69,5.18) *	0.217
no	1.00	1.00	
Supervision by woreda team in the year			
yes	4.53(2.04,10.08)	3.25(1.26,8.37)	0.015
no	1.00	1.00	
Recommended drug supply in the year			
yes	6.28(1.85,21.31)	3.81(0.897,16.16)*	0.07
partially	7.89(2.33,26.72)	7.19(1.71,30.16)	0.007
no	1.00	1.00	
Adequacy of in school training on family health package			
adequate	7.13(1.54,32.88)	10.79(1.89,69.46)	0.007
partially adequate	5.73(1.35,24.31)	5.79(1.15,29.09)	0.033
not adequate	1.00	1.00	

Significant at P-value < 0.05 *- confounders

Table 6 shows some of independent variables that have association with dependent variable; of course there are many variables which have no influence on functionality level statistically. From the table we can conclude that those HEWs who had given refresher training in the year were 4.34 times functional than who didn't and these is statistically significant at p-value, 0.016. Supervision by health center team has no difference on level of functionality at multivariate analysis but had association at bivariate analysis. The difference is not statistically significant (p-value, 0.217) while those HEWs which had supervision from woreda health team were 4.53 times functional than those who did not. Supervision by woreda team has strong significance on functionality of HEWs (p-value, 0.015).Supply of recommended drugs for health post in the year had association with functionality. Those who got drug supply partially are 7.19 times functional than who did not get the drugs.

Adequacy of in school training on family health package has influence on functionality of HEWs. The result shows strong significance for those who reported adequate in school training at p-value, 0.007 while for partially adequate it shows p-value, 0.033 significance level.

5.2. Competence assessment

I Competence assessment on ANC

ANC has five sub tasks which are interpersonal &routine activities, history taking skill, physical examination skill, ANC counseling &education and ANC intervention. From these sub tasks 76.2% of HEWs were competent on inter personal and routine activities and ANC history taking skill followed by 71.4% on ANC counseling and education subtasks while only 45.2% of HEWs were competent on ANC intervention. The total observational result shows 71.4% was competent. On assessment of HEWs knowledge on ANC there was written exam question which has 12 items (5 T/F and 7 MCQ). 88.1% of HEWs answered >50% the question correctly .The mean score of examination was 8.9 from 12 mark. The overall competence on ANC shows 76.2% were competent.

Table 7- HEWs overall competence levels on ANC and its subtasks in East Shoa Zone, Oromia Region, 2010 n=42

Activities	competent	not competent	mean(SD)
	Frequency (%)	Frequency (%)	
ANC interpersonal routine activities(14itms)	32(76.2)	10(23.8)	9.6(3.2)
ANC history taking(8items)	32(76.2)	10(23.8)	5.9(2.5)
ANC skill of physical examination(13items)	29(69)	13(31)	9.05(3.05)
ANC skill of counseling(11items)	30(71.4)	12(28.6)	8.17(2.92)
ANC intervention(3items)	19(45.2)	23(54.8)	2.26(0.77)
ANC examination(12items)	37(88.1)	5(11.9)	8.9(1.89)
ANC observation total(49)	30(71.4)	12(28.4)	34.98(11.19)
overall ANC competence(61)	32(76.2)	10(23.8)	43.88(11.49)

II competence assessment on delivery and new born care

Delivery and new born care activity has three sub tasks these are: interpersonal and routine activities, technical skill on delivery and new born care. Out of these 82.4% of HEWs are competent on interpersonal and routine activities while only 66.7% of them were competent on new born care. Total observation result revealed that 76.5% were competent on these tasks.

Knowledge assessment on delivery and new born had 10 written exam questions (6MCQ and 4T/F).78.6% of HEWs answer >50% of the question correctly. The mean score was 7.1 from 10 marks. The overall competence on delivery and new born shows 66.7% of HEWs were competent.

Table 8 HEWs competence on delivery and new born care in East Shoa Zone Oromia Region, 2010.

Activities under delivery and new born care	competent	not competent	mean(SD)
	Frequency (%)	Frequency (%)	
Interpersonal and routine activities(14 items)(n=34)	28(82.4)	6(17.6)	9.79(2.59)
Technical skill of delivery(18 items)(n=34)	26(76.5)	8(23.5)	13.35(3.68)
New born care(10items) (n=30)	20(66.7)	10(33.3)	6.13(1.81)
Knowledge on delivery and new born care(10items)(n=42)	33(78.6)	9(21.4)	7.1(1.91)
Total observation result(42 items)(n=34)	26(76.5)	8(23.5)	28.56(8.05)
over all competence on delivery and new born care(52items)(n=42)	28(66.7)	14(33.3)	30.21(14.32)

III competence assessment on Post natal care

Post natal care has two subtasks: interpersonal and routine activities and PNC technical skill. 69% of HEWs were competent on both interpersonal and routine activities and technical skill. Total observation results of PNC indicate that71.4% were competent. Knowledge assessment on PNC includes 3 MCQ and 2 T/F questions. From these only 52.4% of HEWs answered >50% of the questions correctly. The mean score was 3.57.

Table 9 HEWs competence level on PNC in East Shoa Zone, Oromia Region, 2010

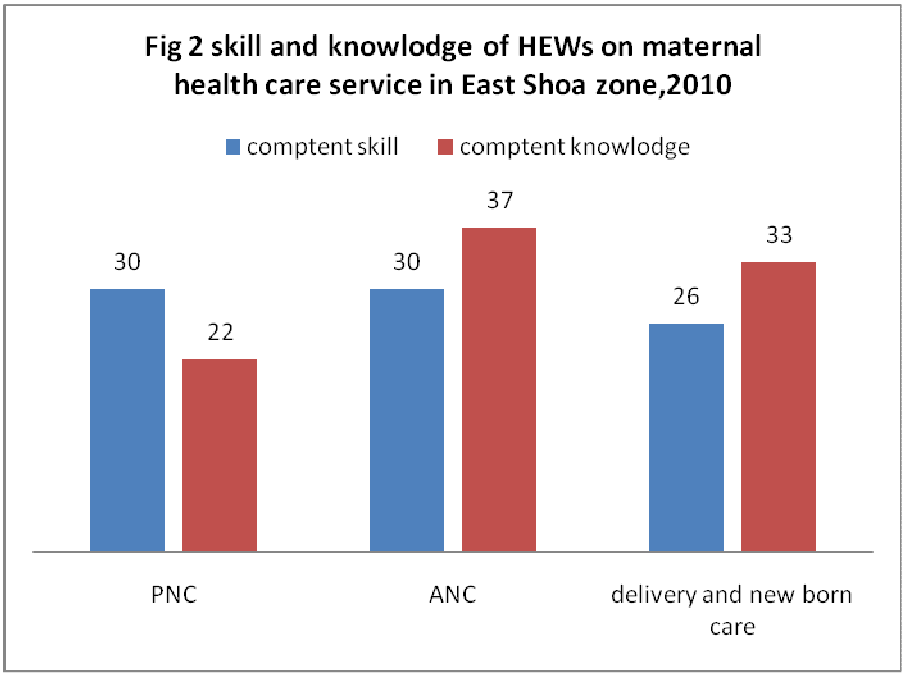
PNC activities	competent		not competent		Mean (SD)
	frequency	percent	frequency	percent	
interpersonal routine activity(14 items)	29	69	13	31	9.64(3.09)
technical skill(9items)	29	69	13	31	6.4(2.31)
total PNC observation(23 items)	30	71.4	12	28.6	16.05(5.18)
PNC knowledge(5 items)	22	52.4	20	47.6	3.57(1.17)
overall PNC competence(28 items)	33	78.6	9	21.4	19.62(5.41)

Comparison of knowledge and skill of HEWs on those tasks

PNC –HEWs were more competent on skill (n=30) than knowledge (n=22)

ANC-HEWs were more competent on theoretical knowledge (n=37) than practical skill (n=30)

Delivery and new born care-HEWs were more competent on theoretical knowledge (n=33) than practical skill (n=26) on the defined task. For all activities the practical skill is result of observational study while theoretical knowledge is result of their exam achievement.



5.3 Result of health post inspection

During observational study besides observing HEWs competence inspection of health post was also held .Out of 42 HEWs observed 4 had no health post, so inspection of 38 health post was done during study period. Inspection of 14 common health post equipments and supplies were observed. Table 10 shows frequency of equipments found in the health post during inspection all most all health posts had Thermometer (37) followed by safety box (36), Fethoscope (35) and stethoscope (35) while stretcher was found only in 10 health post.

Table 10.Medical equipments and supplies in the health post in East Shoa Zone Oromia Region ,2010

Equipments and supplies	Frequency		
	Yes	No	Partially
Refrigerator	21	17	0
Thermometer	37	1	0
Adult weight scale	32	6	0
Baby weight scale	33	5	0
Safety box	36	2	0
Delivery set	34	4	0
Delivery couch	33	5	0
Examination bed	26	12	0
Fethoscope	35	3	0
Stethoscope	35	3	0
Stretcher	10	28	0
Disposable Glove	32	5	2
Important Format	24	5	9
Auto Disposable glove syringe	30	5	3

Essential drug in the health post

There are some recommended drugs for health post. During health post assessment these assessment was done in the selected 38 health posts. Table 11 shows frequency of these essential drugs in the health posts. According to these assessment contraceptives (37) and ORS (37) was highly supplied .Ant malaria (36) was also most supplied drugs. While iron sulphate (25) and anti pain (6) were least supplied drugs for health posts.

Table 11.essential drugs in the health post in East Shoa Zone, Oromia Region, 2010

Drugs	**Frequency**		
	Yes	partially	no
Vaccines	30	5	4
Ant malaria	36	0	2
contraceptive	37	1	0
ORS	37	0	1
Iron sulphate	25	4	9
Anti pain	6	6	26
Ergometrine	0	0	38
Antiseptic solution	29	4	5

6.0 Discussion

According to this study finding the mean population served by HEWs was 3212.When compared to national expected population to be served by one health post is 5000, the study finding is

lower, and these may reduce the burden of HEWs and also may increase their efficiency in the implementation of HEP packages. More than half (58.3%) of health posts in the study area were located at radius greater than 10 km from nucleus health center which is beyond the recommended 10km from nucleus health center it may make referral system difficult (3).

6.1 Assessment of Functionality level

In this study it was found that 92 .9% of HEWs were functional by considering functionality scoring system which is if HEWs responded yes or score"1" for greater than 5 activities of 10 activities asked under family health package. When we compare this finding with anther study in East Gojjam zone the result from East Gojjam study showed higher result (96%). The criterion to define functionality was same in both studies so comparison is fair. When we compare some of specific activities under family health packages with study in East Gojjam, in this study ANC was performed by 87.4% of HEWs while in East Gojjam zone performed by 94.7% of HEWs. Another study from Wolayita zone revealed that 94% of HEWs reported ANC performance (10, 11).

43% of HEWs were only provide delivery service in this study but in East Gojjam study it was 78.9%.These study shows 3.1% delivery was conducted in health post while 4.4% in East Gojjam. Study in Wolayita zone reported 94.8% of HEWs perform delivery, both study results exceed study in East Shoa zone thus it is an indicator that working on these area by East Shoa zone is mandatory to become at least equivalent to this zones(10, 11). Another study done on working condition of HEWs reported that no delivery service was performed in the study period (12). 89% of HEWs perform PNC in the three months preceding this survey but 97% and 82.3% in East Gojjam and Wolayita zone respectively.PNC result of this finding is almost same to both zones finding. A study done in 2007on implementation of HEP in Wolayita showed immunization service was performed by 17.7% while in East Gojjam performed by 97.5% of HEWs in this study it was performed by 97.6% it shows slight difference with study in East Gojjam (10, 11) .

There is great gap with that of Wolayita study it may raise from time when study conducted. This study done during the end of HSDP III program in which HEP will expected to achieve its target 30000 HEWs and get great attention while former studies were done in 2007 (7).

Family planning service was the highest performed activity by 98.2% of HEWs during the study period the reason for this finding may be they provide these activity in outreach, home and health post settings, it shows similar finding with that of study in East Gojjam. Adolescent reproductive health was performed by 89.5% of HEWs it is better result in comparison to that of East Gojjam finding which is 52% it may indicate there is good inter sectorial collaboration between schools in East Shoa zone and HEWs for health education (10). 88.2% of ARH activity focuses on HIV/AIDS teaching &counseling of school adolescent. It has its own impact to tackle expansion of HIV/AIDS to school adolescents.

Essential nutrition service and referral were least performed activities under family health package by HEWs 72.4% and 65.9% respectively but study in East Gojjam showed large proportion of HEWs were performing these activities 96.9% and 82.3% respectively(10). Study on working condition of HEWs showed 60% referral performance in the study period and also study from Wolayita shows 85.6% (11, 12). 81.9% of HEWs reported they treat child hood illness in the last three months before this survey but it is again lower than that of HEWs performance in East Gojjam (82.8%).Growth monitoring was performed by 85.6% of HEWs while in East Gojjam performed by 90.5% of HEWs. The reason for the above finding under family health may raise from most time allocated to family health package was spent on family planning and vaccination, HEWs spent less time on nutrition and ARH, again it influenced by community need for these service and HEWs confidence(knowledge &skill) to provide the service (22).Generally the discrepancy found on level of functionality may resulted from, difference in methods used to assess, objective of assessment and sample size used for assessment in different studies.

Health institution support

This study found that refresher training was associated with HEWs funcitionlty.82.4% of HEWs received training in the past year preceding the survey. From these only 29.9% receive more than

two times a year. The result shows refresher training has association with functionality (AOR= 3.17, 95%CI: [1.28, 8.09] and the association is statistically significant at p-value 0.016. But study from Wolayita showed 72% of HEWs receive more than two times. Study done by CNHDE in 2007 showed 39.5% receive refresher training more than two times (22).

With the rapid expansion of HEP supervision is crucial to link health posts and woreda health offices again supervision from woreda health office showed association with functionality of HEWs (AOR=3.25, 95%CI: [1.26, 8.37] and the association shows statistically significant at p-value 0.015. 39.1% of HEWs received supervision more than three times by woreda supervision team but according to CNHDE assessment in 2007 only 13.1% HEWs receive supervision more than two times from study done in three regions (Oromia,Amharra,SNNP) (22). Another study showed 50% of HEWs receive supervision greater than 3 times per year (12). From the figures one can learn that supervision is not still adequate even though impact of supervision on functionality is great.

Reference material has impact on performance of HEWs but only 33.1% had all important reference materials for their work while 57% had partially. A study from Wolayita revealed 64%, study from East Gojjam revealed 86% and study on working condition of HEWs in 2007 reported no reference material for HEWs, and even those existing materials were HEP packages modules. The trend shows there is improvement in reference material supply than previous time (10-12). Drug supplied in the year was not regularly supplied in the study area, drug supply showed significant association with HEWs functionalty.95.8% of HEWs reported that they supplied important drug in the year. Studies proved that technical challenges HEWs face for their performance reported were, irregular supply of vaccine, lack of storage &carriage facility, irregular/no supply of important drugs, lack of adequate skill and no supervision(22).

Living in the health post compound helps HEWs to run their activities easily and spent their full time on implementing HEP packages, it is better to have house in the health post compound. The study finding showed only 46.2% of HEWs live in the health post compound these result is better than former study on working conditions of HEWs showed 37% and in Wolayita zone in 2007 shows 39% but recent study in East Gojjam in2009 showed 53% of HEWs living in health

post compound (10-12).From the results there is increased trend in providing living house for HEWs.

In School training assessment

Studies shows HEWs spent little time on family health service (12).From these study in school training on family health showed only 37% of respondent said it is adequate, majority (60%) respond that it is partially adequate it lacks both theoretical and practical training as well the time given for training was also short these make them to lose confidence on this package related the rest HEP packages. Studies proved that the curriculum also is full of theory that is beyond the needed skill they would implement in the future, but with lesser practical skill. Due to this high discrepancy between theory and practice, time given to accomplish the theory is more than the actual time given for training of health service extension program, thus, giving little or lesser time for practice(23).

Training center was also not fit for training major deficits reported were 45.9% demonstration room 27.8% no library in the training center. These all may make them not to acquire the desired skill and knowledge for their future work after graduation. This finding was same to that of CNHDE study in 2007 which report inadequate practical/demonstration facilities and compromised apprenticeship program in spite of last minute remedial efforts(4). Study from Tigray described there was no material used for demonstrating delivery, utensils for ORT, materials for environmental health, materials for nutritional assessment, IEC materials for demonstration during health education and model latrines and local water source the students could learn with(23). The study result showed trainers were competent according to 59.6% of HEWs response. A study from Tigray indicate HEWs had positive attitude toward their instructors but study on the first intake HEWs shows only 6% of trainers were degree holder even though the principle said the facilitator should be BSc degree(4, 23).

6.2 competence assessment

Competences encompass knowledge, skill or ability, 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. Although competence is a precursor for doing the job right, measuring performance periodically is also crucial to determine whether providers are using their competence on the job.

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.) (8). In this study core competence of HEWs in terms of selected services under family health package (ANC, PNC, delivery& new born care) were assessed, although HEWs need to be competent in all HEP packages.

The study was done on 42 HEWs which were selected as being functional after first functionality assessment. The data collection was done by using observational check list which was sated based on predefined clinical standard according to MOH and written examination to assess knowledge. Definition of competent in these study was “competent” HEWs should score more than half (>50%) in each activity and sub tasks while for “not competent” if score less or equal to half (≤50%) of procedure and written examination.

Ante natal care (ANC)

Overall competence of HEWs on ANC shows 76.2% .From the five subtasks observed under ANC service less than half (45%) HEWs were competent enough to give interventions during ANC follow up based on mother’s compliant &standard protocol. 69% of HEWs had ANC physical examination skill. HEWs were relatively more competent on interpersonal and routine activities and history taking, about 76% of them done it correctly. This may indicate they have better knowledge in communication than practical skill.

This may be due to skill need l adequate practice and exposure than communication which can be achieved within short time exposure. Generally overall observational assessment shows 71.4% of HEWs were competent while knowledge assessments (exam) 88.1% of them were competent. From this one can conclude that they had more theoretical knowledge on ANC than practical skill. This may resulted from poor practical training. Other studies also revealed that 21.3% HEWs had a complete knowledge on the sign of Anemia (i.e. both marked pallor and

shortness of breath) (22). A study from Tigray revealed that the competence of HSEWs for intervention program on antenatal care of health service extension workers is negligible the result is same to this study finding. Former study from Tigray found that 90.5% of HEWs score greater than cutoff point (50%) on their knowledge on post obstetric history taking, 87.8% skills on examination of ANC and 18.9% on knowledge on danger sign during pregnancy (23).

Another assessment done in Serilanka on public health midwife shows knowledge of specific content does not correlate with competence, again Knowledge of antenatal care was better than delivery care and postnatal care(19). The above result is almost consistent to the study finding. From studies done on competence of HEWs there is gap between knowledge and practical skills.

Delivery and new born care

During study period 34 deliveries were attended by HEWs and observed by data collectors. From these 12 deliveries were at health post, 8 at health center and 14 at home. From the observation result 82.4% of HEWs were competent on interpersonal and routine activities while only 76.5% HEWs were able to conduct labour according to standard procedure. Technical skills assessment showed that 88.2% take V/S(BP,PRetc) of mothers, 76.5% can assess uterine contraction during establishing labour, 79.4% can assess fetal presentation by vaginal examination and only 6.1% of HEWs were used partograph during conducting labour. WHO recommend use of partograph in monitoring labour but study on HEWs by CNHDE indicated that only 27.1% of HEWs used it (22).Study from Tigray found that when 50% cutoff point was used, 77% HSEWs were considered, to be knowledgeable or skilled in assisting a labor, and also the study revealed that HEWs knowledge of detecting danger signs during labor is the most difficult subtask they lack.

Result of group discussion among HEWs in Tigray showed all discussants, believed that they are not able to assist a laboring mother. If a mother requested for the service, they call for TTBAs to assist them (23).

New born care

New born care was done for 30 neonates who were delivered at health post or home out of 34 laboring mothers visited by the HEWs. 4 mothers were referred to other health institution. Observation result on new born care showed 66.7% of HEWs were competent. Only 53.3% of HEWs were grade APGAR score for neonate. Other study also indicates that Competence of

health service extension workers on neonatal care is another intervention program that has a deficiency. Health service extension workers lack to know what to do if a neonate is born preterm or underweight(23). Regarding their knowledge on new born and delivery care76.8% of them answer correct answer for questions. Overall 66.7% of HEWs were competence on delivery and newborn care. Thus the results indicate that this task had great technical (skill) deficit related to other tasks under family health package so it is an indicator that it need great effort to close the knowledge and skill gap.

Post natal care (PNC)

Post natal period is also a period which needs attention to prevent post delivery complications. For this study 42 HEWs were participated in performing PNC during observation period. 30 HEWs were perform the activity for mothers who gave birth in the study period and assisted by HEWs while 12 of them were for mothers who came health post for immunization and by visiting home of mothers before 45 days after delivery. Assessment on this task showed that 69% HEWs were competent both on interpersonal and routine activity as well on technical issues of PNC. From activities performed all most all (97.6%) of HEWs were educate mother about personal hygine,family planning and immunization while 64.3% teach mothers about good positioning and attachment during breast feeding.

What unique finding appear in this task was number of HEWs become competent on knowledge score of PNC is lower than that of observational result in contrast to that of other family health tasks which is only 52% of them were competent in knowledge assessment while total observational result was 71.4%.overall competence on PNC showed that78.6% of HEWs were competent.

6.3 Medical equipment and supplies

Medical equipment

There are recommended equipments which should be found in health post to enhance HEWs performance. Availability of medical equipments at health post was measured by simple counting and observing for availability and its functionality.42 health posts were proposed to be visited but 4 of health posts were under construction and not operating during observation so the result include only 38 health posts.. No health post in the survey area was completely equipped with all important medical equipments. Some of medical equipments found in more than half of

health posts were refrigerator (21HP), Thermometer (37HP), examination bed (26HP), Fethoscope (35HP), etc. Stretcher was found the most scared equipment in the survey areas, it was only found in 10 health posts of survey area. Studies revealed that medical equipments had great impact on functionality and competence of HEWs. Study from Wolayita showed 77% HEWs stated that absence of refrigerator cause not to give vaccination service. Study from this same area reported lower number of weight scale both adult and baby scale(11).

A study done in Tigray region showed Medical equipment that exists in more than half of the health posts were delivery bed in 52.5%, stethoscope in 58% again from focus group discussion result of this study lack of medical equipments, make HSEWs want to leave the health post and go to towns or their families by leaving their job(23). The progress in equiping HP showed encouraging trend it may be due to wide involvement of NGO's in supporting and equipping health posts recent time than before.

Medical supplies

Some of the major recommended drugs and supplies for the health post were assessed since it had also direct impact on competence of HEWs. in the study area Contraception (37HP) and ORS (37HP) were most found supplies out of 42 health posts surveyed .30 health post have all vaccination antigen,5 health post had partially and 4 health post had no vaccine at all during inspection. Only 6 health post had anti pain while 26 had no. No health post had Ergometrine.

7.0 Strength and limitation

Strength

1. Mixed data collection methods used, **self administered and interview**, for phase I Functionality assessment,-phase II competence assessment, **and observational checklist** was used based on clinical standard to perform those activities also **written examination** was prepared to assess their theoretical knowledge.
2. Reduce inter observer bias by using checklist during observation.
3. It is new area and approach to study competence by observing during performing activity.

Limitations

1. Self administered data collection method for first phase functionality assessment survey was used which might enhance social desirability bias and the non-response rate.
2. Small sample size was used to assess competence it may not be representative sample, it was due to lack of resource.
3. Competence measurement tools may cause overestimation or underestimation.

8.0 Conclusion and recommendation

Functionality assessment

Generally HEWs functionality on family health package in the study area was encouraging (92.9%). From the ten activities listed under family health package family planning, immunization and adolescent reproductive health activities had better performance while delivery service, essential nutrition and referral service had limited performance achievement.

Health institution support.

Health institution support was found to be important factor in deter mining functionality of HEWs. This support needs to be systematized and there should be similar access for all HEWs.

Housing of HEWs and equipment supply should not undermined. Refresher training and supervision of health post should be the focus since it had significant influence on functionality of HEWs.

In school assessment

Over all adequacy of school assessment on family health was not satisfactory; it lacks both theoretical knowledge and practical skills. Training center was also not fit for training HEWs it lacked library, demonstration room and adequate staff but HEWs had positive attitude toward their instructors.

Competence assessment

Competency based training is necessary to provide evidence based knowledge and skills. Overall HEWs competence on the three selected areas showed they were more competent on PNC followed by ANC and finally delivery and new born care. Theoretical knowledge score of HEWs on ANC and delivery and new born care exceed their practical skill observed while in PNC they had good practical skill than theoretical knowledge.

Medical equipments (tools) and drug supplies

Medical equipment and drug was not supplied in irregular and consistent pattern. Even though there were equipments which were found in most health posts, like thermometer, safety box, Fethoscope and stethoscope. Stretcher and examination beds were those scared equipment. Contraception was sufficient supply while anti pain and Ergometrine was least supplied drug for health posts.

Recommendations

1. Those activities which had better performance should be kept on and work hard to improve activities which had limited performance scope. Great emphasis should be given for delivery services since the result of performance show below half. East Shoa zone should work collaborate with regional health bureau and woreda health office to change trends of non functionality on each specific activity.

2. East Shoa zonal health department should work on strengthening refresher training and supervision by collaborating with different organization those are working on HEP area. HEWs should be provided house in the health post compound to enhance their activity.

3. The curriculum for the training program should be revised ,it should give more emphasis for practical skill than theory again trainers should be from variety of disciplines and also well qualified. Training centers have to equipped with demonstration room and its equipments, library and adequate teaching staff. Health service extension workers should not graduate unless they complete a given predetermined number of activities.

4.Generally Competence of HEWs were not adequate so the zonal health department as well regional health bureau and concerned body should provide competency based in service trainings for all HEP packages, special consideration should be given for delivery and new born care unless it is better to resign HEWs from this task

5. East Shoa zone health department and the woreda health offices should provide these medical equipments and important drugs at regular time and adequate amount for health posts again those health posts which lack equipment should be equipped with this equipments and tools to enhance their performance and achieve intended goal.

6. Further research is needed to identify factors related to HEWs competence.

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ANNEXES

Annex –I Questionnaires for Functionality Assessment

Study Information Sheet (SIS)- (English version)

Hello! my Name is _____ Iam working as data collector in this study that assess on Functionality and Competence of HEWs on family health packages in East Shoa zone for MPH thesis (Show letter from regional health bureau).

Study title; Assessment of Functionality and Competence of HEWs on Family Health Package in East Shoa zone.

The Assessment is done on Health Extension Program which is new innovative community based program. The main aim of the program is to address the health care inequality in the country at the grass root level by implementing 16 Health Extension Packages. Cross sectional Study Design was used. The study use different data collection methods like using self administer questionner and observational methods. The purpose of study was to assess level of Functionality and Competence of HEWs on Family Health Package in East Shoa zone. The result of study will contribute more for the improvement of the health extension program (HEP) since the program is in its infancy stage. The study was conducted from january.2010-april.2010.

You are selected for this study by using scientific method from the HEWs found in the zone. In this study you're asked to fill self administer questionner for 30 minutes which helps to assess level of Functionality as preliminary survey of all HEWs in East Shoa zone for competence assessment. The information obtained from this assessment will serve only for the intended study objective only and the study result have no any consequence on your personal carrier. Writing your name is not important, secret coding system was used to help us for competence assessment. We have no any incentive for your participation in the study, it is purely volunteer. You have right not to participate and jump any questions which you don't want to answer.

Do you have questions?

If you have questions or compliant any time you can ask;

Name of investigator: Solomon Gadisa

Address tel. +251-0911002394

E .mail : solkat2006@yahoo.com

Informed Consent

I, the selected participant have heard the information in the consent sheet and understood what is required from me, what will happen to me and what my benefit is if I take part in the study. I also belief by the objective of the study. I have told that all the information obtained from me

served only for the study objectives and not for other purpose. I know that I have right to with draw any time from the study without any effect on my daily activities and future carriers.

Now please tell me if you agree to participate?

The participant; 1.Agreed _____continue

2. Not agree _____ end and thanks individual.

Interviewer Agreement

I certify that I have take oral consent from respected respondent that she agreed to participate by understanding all the information correctly.

Data collector name_____ sign_____ date_____

Supervisor name _____ sign_____ date_____

Questionner

Part A- Identification

s.no	Question	Answer	Code

001	Date of data collection		
002	Questionnaire number		
003	Code of HEWs		
004	Name of the Keble		
005	Name of the woreda		
006	Total population of the woreda		
007	Total population of the Keble		
008	Total number of HEWs in the woreda		

Part B- Back ground Information

s.no	Questions	Answer	Code	Go to
101	Age	_____		
102	Educational status	10+1 12+1	1 2	
103	Religion	Orthodox Muslim Protestant Other __	1 2 3 66	
104	Marital status	Married Single Widowed divorced	1 2 3 4	
105	Ethnicity	Oromo Amhara Tigrie Other ___	1 2 3 66	
106	Is there any current disability	No Yes	1 2	
107	How long have you been working as HEW?	----------		

108	How far is your health post from the woreda health office?	<10km >10km	1 2	
109	How far is your health post from health center?	<10 km >10km	1 2	

Part C- Assessment of Functionality of HEWs on Family Health Packages.

s.no	Questions	Answer	Code	Go to
201	Did you give Antenatal care services within the last three months?	No Yes	1 2	→ 203
202	What services do you provide for pregnant mothers?	Immunization (TT) Curative treatments Counseling service All Other ___	1 2 3 4 66	
203	Did you give immunization service Within the last three months?	No Yes	1 2	→ 205
204	For whom do you give immunization?	Children Mother Both Other ___	1 2 3 66	
205	Did you give delivery service within the last three months?	No Yes	1 2	→ 207
206	What type of delivery service did you give?	Safe and clean home delivery Health post delivery Both Other ___	1 2 3 66	
207	Did you give post natal care service within the last three months?	No Yes	1 2	→ 209
208	On what topic did you give counseling service for post natal mothers?	Exclusive breast feeding Family planning Both	1 2 3	

		Other (specify)	66	
209	Did you give essential nutrition action services within the last three months?	No Yes	1 2	
210	Did you perform growth monitoring within the last three months?(baby scale)	No yes	1 2	
211	Did you give family planning service within the last three months?	No Yes	1 → 213 2	
212	What methods of family planning services did you give?	Condom OCP Dipo provera All Other	1 2 3 4 66	
213	Did you treat child hood illness with the last three months?	No yes	1 → 215 2	
214	Which child hood illnesses were treated? (more than one response possible)	Diarrhea Malaria Intestinal helmentiasis Others ____	1 2 3 66	
215	Did you give adolescent reproductive health services within the last three months?	No Yes	1 → 217 2	
216	What kind of adolescent reproductive health services did you give?	HIV/AIDS counseling HTP counseling Condom provision All Other (specify)---------	1 2 3 4 66	
217	Did you refer patients to health center in the last three months?	No Yes	1 2	

218	Which cases did you refer commonly?	Labour Child hood illness Both Other ____	1 2 3 66	

Part D- Assessment of Health Institution and Administrative Support.

s.no	Questions	Answer	code	Go to
301	Have you ever been given refresher training in the past year?	No Yes	1 2	→ 303
302	How many times till now?	≤ two times >two times	1 2	
303	Have you ever been supervised by a health center supervisor team in the past year?	No Yes	1 2	→ 305
304	How many times till now?	≤three times >three times	1 2	
305	Have you ever been supervised by woreda health office supervisor team in the past year?	No Yes	1 2	→ 307
306	How many times till now?	≤two times >two times	1 2	
307	Have you ever been supplied with recommended medical equipments past year?	No Partially Yes	0 1 2	
308	Do you have recommended reference materials for your work?	No Partially yes	0 1 2	

309	Have you ever been supplied with recommended amount and type of drugs past year?	No Partially Yes	0 1 2	→ 311
310	What drugs were supplied? (more than one response is possible)	Contraceptives Anti malaria Vaccinies Others _____	1 2 3 66	
311	Do you have house in the HP?	No Yes	1 2	

Part E- Assessment of School Training

s.no	Questions	Answer	Code	Go to
401	Was the training on family health package adequate for your work?	No partially Yes	0 1 3	 → 403
402	If not What do you think was lacking?	Theoretical training Practical training Both Other(specify	1 2 3 66	
403	Did training centers fit to train HEWs as required?	No Partially Yes	0 1 2	 → 405
404	If not what was lacking?	Demonstration room Library Adequate staff Other ___	1 2 3 66	
405	Did trainers were well competent?	No partially yes	0 1 2	

406	If not what was lacking?	Theoretical knowledge Practical skill Both Other ___	1 2 3 66	

Annex-II Questionner Afan Oromo version

Gaafii(Afan oromo version)

Kuta A Adda basa

Lakk.	Gaafii	Deebii	Koodii
001	Guyyaa ragaan funanamu		
002	Lakkofsa gaafii		
003	Codii Hojetu Extenshinii Fayya(HEF)		
004	Maqaa Gandaa		
005	Maqaa Aanaa		
006	Bayinaa ummataa Aanaa		
007	Bayinaa ummataa Gandaa		
008	Bayinaa HEF Aanaa		

Kutaa B Odefanoo Dhunfa

Lakk.	Gaafii	Deebii	Koodii	Cehii
101	Umrii (waggaa)	_____		
102	Sadarka barnotaa	10+1 12+1	1 2	
103	Amantii	Orthodoksii Islama Protestantii Kan biraa_____	1 2 3 66	
104	Fuudhaa fi Herumaa	Fuudhee Hinherumnee Hiktuu	1 2 3	

		Jala du'e	4	
105	Sabbumaa	Oromoo Amarra Tigree Kanbiraa_____	1 2 3 66	
106	Midhama qamaa qabuu?	Eeyee lakii	1 2	
107	Hamamif akka HEF tajajiltee?	_____		
108	Kellan fayya itti hojetuu biiroo fayya Aanaa irra hamam fagata?	≤10km >10km	1 2	
109	Kellan fayya itti hojetuu buftaa fayya irraa hamam fagata?	≤10km >10km	1 2	

Kutaa C Madalii Rawwii Hojii HEF Paakkejii Fayya Maatii(family health package).

Lakk	Gaafii	Deebii	Kodii	Cehii
201	Ji'otta sadeen darban kessattii tajajila da'umsa duraa kenittee?	Lakki Eeyee	1 → 203 2	
202	Tajajila kaam hadhoolii ulfaaf kenite?	Tallallii (TT) Tajajila walansaa Gorsaa adda adda Hundumaa Kan biraa_____	1 2 3 4 66	
203	Ji'ootta sadeen darban kessattii tajajila tallallii kennittee?	Lakkii Eeyee	1 → 205 2	
204	Tajajila kana eenyuf kenite?	Daa'immaniif Hadholeef	1 2	

		Lachuuf Kan biraa_____	3 66	
205	Ji'ootta sadeen darban kessattii tajajila da'umsaa kenitee?	Lakkii Eeyee	1 → 207 2	
206	Tajajila da'umsaa akkamiit kenitee?	Da'umsaa ofkaltee, manattii Da'umsaa kella fayyattii Lachuu Kan biraa_____	1 2 3 66	
207	Ji'ootta sadeen darban kessattii tajajila da'umsa boodaa kenitee?	Lakkii Eeyee	1 → 209 2	
208	Tajajila da'umsa boodaa mata du reemaalii irrattii gorsa fi barumsa keniiteef?	Harma hosisuu Karora maatii Lachuu Kan biraa_____	1 2 3 66	
209	Ji'ootta sadeen darban kessattii tajajila nyata dablata kenitee?	Lakkii eeyee	1 2	
210	Ji'ootta sadeen darban kessattii tajajila hordhofii guddina da'imanii kenitee?	Lakkii eeyee	1 2	
211	Ji'ootta sadeen darban kessattii tajajila karoora maatii kenitee?	Lakkii Eeyee	1 → 213 2	
212	Akkaku karoora maatii isaa kam kenite?	Kondoomii Kininii(OCP) Dipoo Hunduma kan biraa_____	1 2 3 4 66	

213	Ji'ootta sadeen darban kessattii tajajila Wal'ansa dhiibee da'imanii kenitee?	Lakkii Eeyee	1 → 215 2	
214	Dhiibewaan da'imanii kaam wal'antee? (tokko ol debisuun ni danda'ma)	Garaa kaasaa ykn baasaa Busaa Raamoolee garaa Kan biraa_____	1 2 3 66	
215	Ji'ootta sadeen darban kessattii tajajila wal hormata fayya dargaggootaa kenitee?	Lakkii Eeyee	1 2	
216	Tajajila fayya dargaggota kam kenite?	Barumsa waa'ee HIV/AIDS Barumsaa Barmatilee dubbattii hafaa irrattii Kondoomii dheyesuu hundumaa Kan biraa _____	1 2 3 4 66	
217	Ji'ootta sadeen darban kessattii tajajila olerginsaa(refer) dhukubsatota gara buftaa fayya ttii kenitee?	Lakkii Eeyee	1 2	
218	Tajajila maalittif ergitee turee?	Da'umsaaf Wal'ansa da'imanittif Lachuuf Kan biraa_____	1 2 3 66	

Kuta D Madallii Dhaabilee Fayyaa fi gargarsa bulchinsaa

Lakk.	Gaafii	Deebii	Kodii	Cehii
301	Wagga kana kessattii lenjjii argatee bektaa?	Lakkii eeyee	1 → 303 2	
302	Yeroo meqaa fudhatee?	Lama fi lama gadii Lama ol	1 2	
303	Wagga kana kessattii daawii ykn supervisinii garee bufta fayya Aanaa dhufee jiraa?	Lakkii Eeyee	1 → 305 2	
304	Yeroo meqaa dawatamtee?	Sadii fi sadii gadii Sadii ol	1 2	
305	Wagga kana kessattii daawii ykn supervisinii gareen supervisiinii Aanaa dhufee jiraa?	Lakkii eeyee	1 → 307 2	
306	Yeroo meqaa dawatamtee?	Lama fi lama gadii Lama ol		
307	Meeshale waldhansaa barbchisan yeroo dhaan ni argataa?	Lakkii eeyee	1 2	
308	Kitabolee fi baruulee degersaa barbachisan qabdaa?	Hin qabuu Gaha mitii Eeyee	0 1 2	
309	Wagga kana kessattii qorichaa barbachisan argatee?	Lakkii Gaha mitii Eeyee	0 → 311 1 2	

310	Qorichawan kam argatee? (tokko ol filchun ni dandama)	Kinini ittisa da'umsa Qoricha busaa Dawaa talalii Kan biraa_____	1 2 3 66	
311	Mannii jireenya kee dalla kella fayya kessaa?	Lakkii Eeyee	1 2	

Kutaa E Gamgama leenjii mana barumsaa

Lack.	Gaafii	Deebii	Kodii	Cehii
401	Leenjiin pakeejii fayya maatii irrattii kenemuu hojii keetif gahadha?	Lakkii Gaha mittii Eeyee	0 1 2 →	403
402	Yoo gaha mittii ta'e maaltuu hanqatee?	Barumsa tiyoorii Barumsa hojiidhani(practice) Lachuu Kan bira_____	1 2 3 66	
403	Gidugalessi leenjii leenjichaf gaha sittii fakkataa?	Lakkii Guttu mittii Eeyee	0 1 2 →	405
404	Yoo mittii ta'e maaltuu hanqatee?	Kutaa hojatani agarsiisu Mana kitaba Humna nama Kanbira _____	1 2 3 66	

405	Lenjistoni leenjicha ga'umsa qabuu?	Hin qaban Gaha mitii Eeyee qabu	0 1 2	
406	Yoo mittii ta'e maaltuu isaan hanqatee?	Bekumsa tiyoorii Dandettii hojidhan agarsiisu Lachuu Kanbiraa_____	1 2 3 66	

Annex III –checklist for competence assessment

Study Information Sheet (SIS) for Competence Assessment (HEWs).

Hello. My name is _____.Iam member of team, which conduct this survey for MPH thesis (show letter). The aim of the survey is to assess HEWs competence on maternal health services at this zone. You are selected for this study by using scientific method. The observational study will take two complete working days and hours (if no client visit HP for these services during the 1st day), I stay with you to observe your competence during doing your daily activities using standard check list on maternal health care services (ANC, PNC and delivery and new born care) and also there is short written exam (30Q) on same issue in the form of MCQ and T/F. The study result has no any negative consequences on your personal carrier; it will serve to strengthen the Health Extension Program by assessing level of Competence on maternal health care services. Your name is not important for the study objective. The information obtained will serve for intended purpose of the study not for other purpose, your right to participate in the study is purely volunteer; you have right to withdraw from study any time without affecting your daily activities.

Do you have questions?

If you have question or compliant any time you can ask;

Name of investigator Solomon Gadisa

Address tel. +251-0911002394

E .mail solkat2006@yahoo.co

Informed Consent

I, the selected participant have heard the information in the consent sheet and understood what is required from me, what will happen to me and what my benefit is if I take part in the study. I also belief by the objective of the study. I have told that all the information obtained from me served only for the study objective and not for other purpose. I know that I have right to with draw any time from the study without any effect on my daily activities and future carriers.

Now please tell me if you agree to participate?

The participant; 1.Agreed _____continue

2. Not agree _____ end and thanks individual.

Interviewer Agreement

I certify that I have take oral consent from respected respondent that she agreed to participate by understanding all the information correctly.

Data collector name_____ sign_____ date_____

Supervisor name _____ sign_____ date_____

Study Information Sheet (SIS)

For client receiving service

Greeting

“Hello. My name is _____.Iam member of team, which conduct this survey for MPH thesis. Iam also health professional. The aim of the survey is to assess HEWs competence on maternal health services (Antenatal care, Post natal care, Delivery and Newborn care) at this zone. I need your permission to observe your visit with the health post staff. Your participation is extremely important to us, but it is entirely voluntary. You do not have to let us observe the visit if you do not want to. You will not be denied any services if you decide not to participate. We will not write down your name and everything you discuss today will be kept strictly confidential. During your visit, I will be sitting a little apart from you and the health extension worker. There are no risks or direct benefits to you from participating in the survey but your participation will contribute to improving services in this zone and also nationwide.

Do I have your permission to continue?" Yes ___ continue

No _____ end (wait for another client)

Observer Agreement

I certify that I read the statement above to the client and she agreed to participate in the study

Observer Name _____Sign _____, date _____

Supervisor Name_____sign_____, date_____

Module I

Observation Checklist for Antenatal Care for Health Extension Workers in East Shoa zone.

Instructions for observers:

When pregnant mother arrives for antenatal care at the health facility, ask her if she is willing to let you observe the visit. It is important that you gain her informed consent before beginning the observation, so the following greeting should be given. After reading the greeting, sign and date the statement that indicates whether or not the client agreed to participate

Sudy Information Sheet (SIS) for client visiting health post for ANC

Greeting

"Hello. My name is _____.Iam member of team, which conduct this survey for MPH thesis. Iam also health professional. The aim of the survey is to assess HEWs competence on maternal health services at this zone. I need your permission to observe your visit with the health post staff. Your participation is extremely important to us, but it is entirely voluntary. You do not have to let us observe the visit if you do not want to. You will not be denied any services if you decide not to participate. We will not write down your name and everything you discuss today will be kept strictly confidential. During your visit, I will be sitting a little apart from you and the health extension worker. There are no risks or direct benefits to you from participating in the survey but your participation will contribute to improving services in this zone and also nationwide.

Do I have your permission to continue?" Yes ___ continue

No _____ end (wait for another client)

Observer Agreement

I certify that I read the statement above to the client and she agreed to participate in the study

Observer Name _____Sign _____, date _____

Supervisor Name_____sign_____, date_____

Name of kebele _____ code _____

Woreda _____ code_____

Code of HEW _____

Name of observer _____

Date of observation _____

Time of observation start _____end_____

Section I. Interpersonal Relations and Routine activities**.**

Code	Interpersonal and routine activities.	Observation result		
A 001	Does the HEW?	Yes (1)	No (0)	Not applicable(99) (reasons)
A	Prepare necessary equipments			
B	Dress appropriately for work			
C	Greet client			
D	Assure client privacy			
E	Review client's previous records			
F	Wash Hands			
G	Ask open-ended questions			
H	Encourage client to ask questions			
I	Treat client with respect			
J	Use appropriate IEC materials			
K	Give client IEC reading material (if available and appropriate)			
L	Refer client if necessary			
M	Discuss return visit			
N	Records all findings, assessments, diagnosis, and cares for client.			

Section II History.

No of Antenatal visit _____

s.no	Activities	Observation result		
101	Does HEW ask the following?	Yes (1)	No (0)	Not applicable(NA)(99)
A	Ask for socio demographic characteristics			
B	Ask for present history of pregnancy.			
C	Ask for history of obs/gyn present and past			
D	Ask for last menstrual period(LMP)			
E	Number of Prior pregnancies?			
F	Any prior stillbirth(S), abortion etc.			
G	Any heavy bleeding during or after delivery with a prior pregnancy?			
H	Any previous assisted delivery? (Caesarean-section, forceps)			

Section III Physical examination

201	Does HEW perform these activities according to standard protocol?	Yes(1)	No (0)	Not applicable(99) (reasons)
A	Check general appearance			
B	Check for anemia			
C	Check edema			
D	Check blood pressure			
E	Check height			
F	Check weight			
G	Check Fundal height			
H	Auscultate fetal heart beat (2^{nd} trimester)			

I	Palpate breast,thyiriod gland etc			
J	Check lie and presentation in 3rd Trimester			
K	Note assessment of complaints in History			
L	Check previous caesarean section Scar.			
M	Other examination			

Section IV Counseling and Education.

301	Does HEW discuss with client about?	Yes (1)	No (0)	Not applicable (99) (reasons)
A	Place of delivery and expected date of delivery(EDD)			
B	Quantity and quality of food to eat during pregnancy			
C	Danger signs and symptoms as risk factors for which the woman should visit the health facility?			
D	Personal well-being (e.g. adequate rest, good hygiene, nutrition)			
E	Family planning after delivery			
F	Use of insecticide bed net			
G	Counseling newborn care (exclusive breastfeeding,)			
H	How far to closest health facility or to get TBA			
J	No smoking, No drinking alcohol or taking drugs, No non-prescribed medicines.			

K	Routine tests during pregnancy			
L	About PMTCT,harmful traditional practices			

Section V Ante natal Interventions.

401	Does HEW give these interventions according to standard protocol?	YES(1)	No (0)	Not applicable (99)
A	Iron folate			
B	Anti malaria			
C	TT immunization			

Module II

Observation Checklist for Safe and Clean Delivery and New Born Care

For Health Extension Workers in East Shoa zone.

Instructions for observers:

When laboring mother arrives at the health facility, ask her if she is willing to let you observe the visit. It is important that you gain her informed consent before beginning the observation, so the following greeting should be given. After reading the greeting, sign and date the statement that indicates whether or not the client agreed to participate.

Greeting

“Hello. My name is _____.Iam member of team, which conduct this survey for MPH thesis. The aim of the survey is to assess HEWs competence on maternal health services at this zone. I need your permission to observe your visit with the health post staff. Your participation is extremely important to us, but it is entirely voluntary. You do not have to let us observe the visit if you do not want to. You will not be denied any services if you decide not to participate. We will not write down your name and everything you discuss today will be kept strictly confidential. During your visit, I will be sitting a little apart from you and the health extension worker. There are no risks or direct benefits to you from participating in the survey but your participation will contribute to improving services in this zone and also nationwide.
Do I have your permission to continue?" Yes ___ continue

No _____ end (wait for another client)

Observer Agreement

I certify that I read the statement above to the client and she agreed to participate in the study.

Observer Name _____Sign _____, date _____

Supervisor Name_____ sign_____, date_____

Name of kebele _____ code _____

Woreda _____ code_____

Code of HEW _____

Name of observer _____

Date of observation _____

Time of observation start _____end_____

Section I. Interpersonal relations and Routine activities**.**

Place of delivery 1.Health post 2. Home

Code	Interpersonal and routine activities.	Observation results		
B 001	Does the HEW?	Yes (1)	No (0)	Not applicable(99) (reasons)
A	Prepare necessary equipments(gloves and delivery kits)			
B	Dress appropriately for work			
C	Greet client and introduce self			
D	Assure client privacy			
E	Review client's previous records			
F	Hand washing before and after procedures.(soap& water)			
G	Ask open-ended questions			
H	Encourage client to ask questions			
I	Treat client with respect			
J	Use appropriate IEC materials			
K	Give client IEC reading material (if available and appropriate			
L	Refer client if necessary			
M	Discuss return visit for postnatal care			

N	Records all findings, assessments, diagnosis, and cares for client.			

II. Observing Technical Skills on safe and clean delivery and New born care.

Code	Technical activities	Observation results		
B101	Does the HEW?	Yes (1)	No (0)	Not applicable (99) (reasons)
A	Take socio demography history			
B	Take detail history of present and past obstetrics and gynecology.			
C	Ask when labour start (membrane ruptured)			
D	Encourage and provide emotional support			
E	Take mother's vital sign (BP,PR,etc)			
F	Assess uterine contraction			
G	Check fetal presentation, descent, by vaginal examination (if not correct refer)			
H	Use surgical glove for whole procedures			
I	Use partograph			
J	Ask and observe for presence of bleeding(if there referral)			

K	Auscultate fetal heart beat.			
L	Deliver baby			
M	Clamps and cuts the umbilical cord.			
N	Use oxytocin 10units or 0.2mg ergometrine IM to deliver placenta.			
O	Deliver placenta			
P	Check for completeness of placenta.			
Q	Check Mather's pulse and BP			
R	Clean perineal area after delivery			

III New Born Care

code	Technical activities	Observation results		
B 201	Does HEW?	Yes (1)	No (0)	Not applicable(99) (reasons)
A	Clean baby's face and wrap with towel			
B	Assess for danger sign(APGAR score)			
C	Give basic resuscitation			
D	Give TT eye ointment			
E	Cord tie and cord care			
F	Give BCG vaccine.			
G	Attach baby to mother's breast within first hour of delivery.			
H	Perform kangaroo mother care for hypotermic baby.			
J	Give vit.K injection			
K	Register date/time, sex weight of baby on birth card.			

Module III

Observation for Post Natal Care

For Health Extension Workers in East Shoa Zone.

Instructions for observers:

When post natal mother (from delivery to 6wks) arrives at the health facility, ask her if she is willing to let you observe the visit. It is important that you gain her informed consent before beginning the observation, so the following greeting should be given. After reading the greeting, sign and date the statement that indicates whether or not the client agreed to participate.

Greeting

“Hello. My name is _____.Iam member of team, which conduct this survey for MPH thesis. The aim of the survey is to assess HEWs competence on maternal health services at this zone. I need your permission to observe your visit with the health post staff. Your participation is extremely important to us, but it is entirely voluntary. You do not have to let us observe the visit if you do not want to. You will not be denied any services if you decide not to participate. We will not write down your name and everything you discuss today will be kept strictly confidential. During your visit, I will be sitting a little apart from you and the Health Extension Worker. There are no risks or direct benefits to you from participating in the survey but your participation will contribute to improving services in this zone and also nationwide. Do I have your permission to continue?" Yes ___ continue

No _____ end (wait for another client)

Observer agreement

I certify that I read the statement above to the client and she agreed to participate in the study.

Observer Name _____Sign _____, date _____

Supervisor Name_____ sign_____, date_____

Name of kebele _____ code _____

Woreda _____ code_____

Code of HEW _____

Name of observer _____ signature _____

Date of observation _____

Time of observation start _____end_____

I. Interpersonal and routine activities

code	Interpersonal and routine activities.	Observation results		
B 001	Does the HEW?	Yes (1)	No (0)	Not applicable(99) (reasons)
A	Prepare necessary equipments.			
B	Dress appropriately for work			
C	Greet client and introduce self			
D	Assure client privacy			
E	Review client's previous records			
F	Hand washing before and after procedures.(soap& water)			
G	Ask open-ended questions			
H	Encourage client to ask questions			
I	Treat client with respect			
J	Use appropriate IEC materials			
K	Give client IEC reading material (if available and appropriate			
L	Refer client if necessary			
M	Discuss return visit			
N	Records all findings, assessments, diagnosis, and cares for client.			

II Technical Skills on Post natal

code	Technical activities.	Observation result		
C 201	Does HEW?	Yes (1)	No (0)	Not applicable (99) (reasons)
A	Ensure the uterus has completely contracted			
B	Observe for sign of bleeding and infection.			
C	Counseling about exclusive breast feeding			
D	Demonstrate good positioning and attachment for breast feeding and how baby can get sun light.			
E	Teaching about personal hygiene, family planning, immunization etc			
F	Counsel about rest and feeding			
G	Counsel and demonstrate about complementary feeding for mother.			
H	Give vit.A supplementation.			
I	Give Iron sulphate			

Annex IV -Basic Knowledge Questions

Choose correct answer for multiple choice questions and answer True or False for non multiple choice questions.

Ante natal care

1._____ Inspecting palm and eye conjectiva is important to detect Anemia. T/F

2._____ Hand washing before and after each procedure is important. T/F

3. _____All pregnant mothers can be considered as risk. T/F

4._____Pregnant women are not at risk for malaria. T/F

5._____On your physical examination if you find palmar pallor and whitish conjectiva what is your intervention?

A .Iron folate B .Vit.A supplementation

C .TT vaccination. D .No intervention.

6 ._____The minimum ANC visits for pregnant mothers are?

A .Two visits B. Three visits

C .Four visits D. Eight visits

7. _____What are the conditions to refer mother to nearest health center (hospital)?

A .If there is abnormal vaginal bleeding.

B .If mother have previous caesarean section(C/S).

C .If the age <18 and height< 150 cm in first pregnancy.

D. All of the above.

8 .____A uterus is palpable at the umbilicus is equivalent to;

A. 15 wks of pregnancy B. 25 wks of pregnancy

C .20 wks of pregnancy D .32 wks of pregnancy

9. ------ Hypertension in pregnancy is diagnosed when blood pressure is more than;

A .120/80mmHg B.150/80 mmHg

C .130/80mmHg D.140/90mmHg

10. _____A round, ballatable mass at the pelvic brim implies that the presentation is;

A .breech B.shoulder

C .compound D.cephalic

11. _____After 36 wks of gestation mothers should have ANC visit (if no problem)

A .Every 2 wks B.Every 4 wks

C .Every week D.Every 3 wks

12. --------How many doses of TT vaccination should a woman get in her life?

A. 2 doses B.4 doses

C. Single dose D .5 doses

Delivery and New born

13. ____Normal presentation during pregnancy is

A .vertex B.Breech

C .shoulder D. Brow

14. --------Labour has

A .Three stages B. One stage

C .Four stages D. Two stages

15. _____Which labour stage needs strict follow up?

A .1st stage B.2nd stage

C .3rd stage D.4th stage

16. -------The sign of placenta separation in the third stage of labour are?

A .Lengthening of the cord

B .Gush of blood.

C .Contracted uterus

D .All.

17. _____New born should start breast feeding within

A .1st hour after delivery

B, 24 hours after delivery

C .6 hours after delivery

D .2 days after delivery

18_____.The first step to protect new born from hypothermia (excessive cold).

A .Drying baby and wrapping immediately after birth

B .Drying baby after umbilical cord has been cut

C .Drying the baby after 1st day of birth.

D .Drying baby after 1st hour of birth.

19. -------Parto graph help to manage progress of labour in relation to time. T/F

20._____True contraction is characterized by achieving cervical dilatation. T/F

21._____Post partum haemorrhage is the main cause of maternal mortality. T/F

22._____If mother excessively bleeds try to manage at your health post. T/F

Post natal care

23. ____Sign of good attachment during breast feeding is

A .Baby's chin should touch breast

B. Baby's mouth should open wide

C. Baby's lower lip should turned out

D .All

24_____Infant should feed breast in24 hrs;

A .On demand B. Two times

C .3-4 times D.5 times

25. ------Children under 6 months get

A. Breast milk only

B .Breast milk with water

C .Breast milk with other food

D .Breast milk, sugar and water.

26____.Mother should have emptied first breast before attaching to the second. T/F

27____. Mothers should have washed their hands and breast before feeding their children's. T/F

ANNEX-V- Checklist for inspecting Health Posts

Observational Checklist for inspecting Health Post (Equipment and Supplies).

s.no	Equipments	Yes (2)	Partly(1)	No (0)	Remark
1	Is there refrigerator?				
2	Is there auto disposable syringes				
3	Thermometer				
4	Adult weight scale				
5	Baby weight scale				
6	Is there safety box?				
7	Delivery set				
8	Delivery couch				
9	Examination bed				
10	Fetoscope				
11	Stethoscope and BP apparatus				
12	Strature				
13	Gloves (disposable and surgical)				
14	Important formats, cards and stationery materials.				

sno	**Essential drugs in Health Post**	Yes (2)	Partly (1)	NO (0)
1	Are all vaccines available?			
2	Anti malaria			
3	Contraceptive			
4	Oral réhydrations Salt			
5	Iron sulfate			
6	Antipain			
7	Ergometrine			
8	Antiseptic solution (alcohol & savalon)			