



***TRAINING OF HEALTH EXTENSION WORKERS:  
FIRST INTAKE ASSESSMENT***

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Center for National Health  
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## ACRONYMS

<b>ART</b>	Anti-Retroviral Therapy
<b>CBRHA</b>	Community-Based Reproductive Health Agents
<b>CHA</b>	Community Health Agents
<b>EC</b>	Ethiopian Calendar
<b>FP</b>	Family Planning
<b>HC</b>	Health Center
<b>HEP</b>	Health Extension Package/Program
<b>HEW</b>	Health Extension Worker
<b>HP</b>	Health Post
<b>HS</b>	Health Station
<b>ICT</b>	Information Communication Technology
<b>MOA</b>	Ministry of Agriculture
<b>MOE</b>	Ministry of Education
<b>MOH</b>	Ministry of Health
<b>MOLSA</b>	Ministry of Labor and Social Affairs
<b>MWUD</b>	Ministry of Works and Urban Development
<b>PC</b>	Personal Computer
<b>PHN</b>	Public Health Nurse
<b>PPP</b>	Purchasing Power Parity
<b>RHB</b>	Regional Health Bureau
<b>SDP</b>	Service Delivery Point
<b>TBA</b>	(Trained) Traditional Birth Attendant
<b>TV</b>	Technical and Vocational
<b>TVE</b>	Technical and Vocational Education
<b>TVETI</b>	Technical and Vocational Education and Training Institute
<b>WEO</b>	Woreda Education Office
<b>WHOs</b>	Woreda Health Office
<b>ZHD</b>	Zonal Health Department

## *Summary of Findings*

The most encouraging aspect is that most trainees seem genuinely positively disposed towards their assignment, despite not having been recruited from rural kebeles and despite the hard conditions under which they have trained. The trainers are confident in their training ability, have positive attitudes toward the Health Extension Program (HEP) in general and the training program in particular. The institutes have provided classrooms and a number of other resources, which is an important indication of ownership and commitment to the program.

## *Specific Challenges and Recommendations*

**Problem 1.** The selection process was dominated by the Technical and Vocational Education (TVE) sector with minimal involvement of the health sector. Most trainees were selected from woreda towns (not rural kebeles) and this could have a distorting effect in the future development of the HEP. Another major weakness is that the program seems to have attracted trainees with much lower grades compared, for example, to those in the regular TVE programs. This has been compounded by the adverse learning conditions and, in the case of Amhara and Tigray, living conditions (no stipend).

**Recommendations:** Involve the TVETIs more actively in the planning of future intakes and involve them more closely in issues/decisions related to HEW training e.g. improvement of the teaching/learning process, preparation for apprenticeship, and status of trainers.

- Start recruitment as early as feasible so as to attract students with better GPA
- Give more firm and clear guidelines on selection; make sure it starts at kebele level and make it as participatory and transparent as possible
- Involve Woreda Health Offices (WHOs) more actively with a clear mandate in the selection process
- Study the possibility of introducing a stipend (Amhara & Tigray)

**Problem 2.** The trainers are too few in numbers and therefore are overloaded. They feel insecure about their status as they feel lost between the TV and the health sectors.

**Recommendations:**

- Increase the number of trainers significantly to decrease their load
- Make their employment status (duties and privileges) clear and compatible with their future career development

**Problem 3.** The teaching/learning process suffers from the lack of textbooks, reference materials, inadequate practical/demonstration facilities and a compromised apprenticeship program in spite of last minute remedial efforts. The operational budget was clearly inadequate. The issue of uniforms for trainees and eventually HEWs needs to be clarified. There are a number of resources at the local level (health workers training institutions, RHB, WHOs, HC) which could be tapped, to a certain degree, to supplement HEW training.

**Recommendations:**

- Provide textbooks to trainees as soon as possible (at least one copy for each Health Post). Start with the modules in Amharic, and eventually prepare materials in other languages
- Organize demonstration rooms with adequate teaching aids
- Organize the apprenticeship program better and design ways for more active supervision by trainers, WHOs & the HC; as much as possible, avoid the peak harvest or rainy season
- Increase operational budget
- Strengthen relationship with stakeholders and mobilize local resources to support the training program.

**Problem 4.** The first group of HEWs is being deployed but WHOs and Health Centers in woredas seem ill-prepared to receive and put them effectively to work. Most WHOs do not have adequate staff and budget to ensure proper supervision and support. Only salaries of HEW have been budgeted with no provision for operational expenses for HEP and the additional tasks of WHOs related to the HEP. Community mobilization in support of HEP has hardly started.

**Recommendations:**

- Design clear HEP operational plans, including costs at the WHO level
- Issue clear guidelines for community mobilization in support of the HEP

**Problem 5.** Preparation for future training programs should start immediately. Since deficiencies in the training is still being improved, new HEWs are bound to lack in a number of skills. In addition, they have to be introduced to new assignments (e.g. antiretroviral therapy) and changes in technology (e.g. new drugs for malaria). The issues of upgrading training and future training centers for HEW (to replace attrition etc) should be addressed as soon as possible.

**Recommendations:**

- Prepare clear plans for the remedial/continuing education of HEW;
- Establish a mechanism (such as a taskforce or committee) to study and plan upgrading (as appropriate) training and future training centers for HEWs.

## 1 INTRODUCTION

Ethiopia is suffering from a health crisis due primarily to communicable diseases, poor nutrition, and lack of access to health services. Since 47 percent of the population lives below the poverty line and income per capita is only around USD 100, most people cannot afford health care, and consequently the average life span remains only 46 years. The main 'modern' health care provider is the government, which manages most of the country's 3,563 Health Station/Health Posts, 412 HCs and 115 hospitals (Table 1.1).

**Table 1.1: Health Care in Ethiopia, (1996/7, 2001/2 and Planned for 2015)**

<i>Indicators</i>	<i>circa 1996/7</i>	<i>circa 2001/2</i>	<i>circa 2015</i>
Estimated population (Millions)	58.3	67.2	90
Rural population (as % of total)		84.5	
Population growth rate (%)	2.9	2.6*	2.0
Infant Mortality (per 1000 live births)	110-128	116*	50
Maternal mortality ratio (per 100,000 live births)	500-700	871 <sup>1</sup>	300
Life expectancy at birth	52	45.5*	64
Daily calorie supply per capita		1,610.0*	
Underweight children for age, under age 5(%)		47	
Malaria, Number of cases per 100,000 people		556*	
TB, Number of cases per 100,000 people		179*	
Physicians per 100,000 people	2.6	1.7/2.8	6.8
Population with access to health services, %	45/53	62	90
Population with access to improved-water sources, %		24*	
Population with access to adequate sanitation facilities, %		15*	
Contraceptive coverage %	8	14.6	40
Immunization coverage %	67	55	90
Number of hospitals (number of beds in brackets)	89	115 (11710)	
Number of Health Centers	246	412	3161
Number of HP/HS	2291	3763	15805
Number of physicians	1470	1888	4405
Number of surgeons & ob/gyn	68	119	
Number Of Health Officers	30	484	3161
Number Of nurses (junior nurse in brackets)	3114	12823	38940 (+16117)
Health expenditure (government): total (USD million)	60.36	69.57	
Health expenditure (government): per capita (US\$)	1.04	1.04	

Source: Adapted from UNDP 2003 and MOH 2003

Modern health services only cover about 60% of the population, with most of the rural,

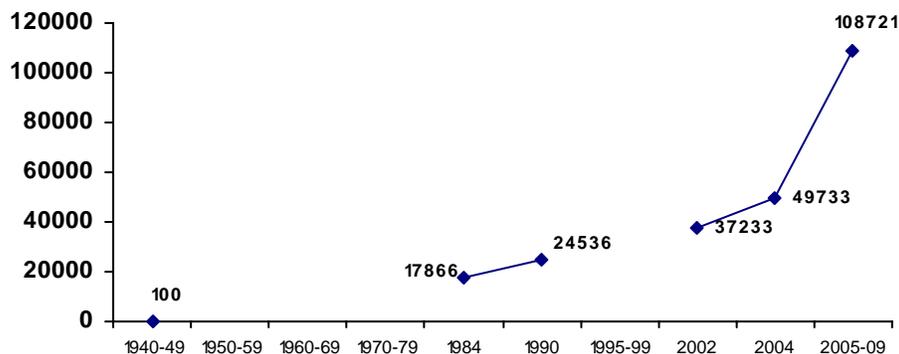
nomadic pastoralist and fringe areas having little access. Even these limited services are underutilized due to economic and social barriers. The low rate of health care utilization is indicated in the fact that only 30% of pregnant women receive antenatal care and only 10% are attended by a health professional during delivery.

In response to the country's health crisis, in 2003 the government introduced the Health Extension Program (HEP) as part of the primary health care service. The HEP is an innovative health service delivery program that aims for universal coverage of primary health care. The program gives priority to the prevention and control of communicable disease with active community participation, with the goal of providing equitable access to health services. The program is based on expanding physical health infrastructure and developing a cadre of Health Extension Workers (HEWs) who will provide basic curative and preventive health services in every community. The initiative is critical for health development in Ethiopia.

The HEP will place two government-salaried female HEWs in every *kebele*, with the aim of radically shifting the emphasis of the country's healthcare system to prevention and to improve uneven resource distribution.

The government has now decided to accelerate the implementation of the HEP in order to cover the whole country by 2009. Training of 2,400 HEWs was completed by the end of 2004; 7,000 HEWs will be trained in 2005 and a total of 30,000 HEWs will be trained by 2009. Thousands of other health care services staff, particularly at the HC level, will receive training to aid in the accelerated implementation of the HEP.

The magnitude of the effort that is being undertaken can be best appreciated by examining the growth in health service human resources that will be deployed by 2009. The number of new health service staff positions that will be created under HEP in less than five years is more than double the number that that was created in the more than 5 decades (Fig. 1).



## 2 THE ASSESSMENT

### 2.1 The need for assessment

The training program for Health Extension Workers (HEW) is a new and innovative program. The curriculum and teaching materials have been developed on the basis of limited experience from the pilot projects carried out in the country and inputs from similar programs carried out in other countries. This curriculum has been employed for a year now, having been used during the first complete cycle of HEW training.

The experiences from this first training can provide important information which can be used to develop and refine the program for future years. It is essential that a rigorous, professional assessment of the current program is undertaken in order to draw lessons for the future.

### 2.2 Assessment Objective

The objective was to assess the first year's HEW training program in terms of its inputs, processes and impact in order to recommend improvements for subsequent trainings

Specifically, the following issues were assessed:

- recruitment process and outcomes
- adequacy of the curriculum
- quality of the training process

- perception of trainees, trainers and other stakeholders
- needs for continuing education

## **2.3 Methodology**

The Center for National Health Development in Ethiopia (CNHDE) undertook the assessment. A former member of the Education Faculty at Addis Ababa University, with expertise in training evaluation, (now on UNESCO assignment in the Ministry of Education) provided expertise in educational planning and evaluation. The staff of the CNHDE developed the assessment methodology of which the main components were:

***a. Survey to assess the students, trainers and facilities on various aspects of the training program***

***b. In-depth study of the training centers***

CNHDE staff members carried out the in-depth on-site assessments of all the training centers operational for the first intake (except the training center in Mettu). Assessments were undertaken through visits, interviews, and questionnaires. In addition, discussions were held with area health service offices including the Regional Health Bureau (RHB), the Woreda Health Office (WHO), the HC, and the Woreda administration. Instruments developed for the survey were adapted for use in interviews with health service offices.

***c. Feedback and dissemination of findings***

Assessment findings will be disseminated to responsible officials involved with the training to ensure that appropriate follow up is undertaken.

## **3 THE TRAINING PROGRAM**

### **3.1 Technical and Vocational Education (TVE)**

Currently, the TVE being undertaken in the country is based on a major, multi-billion birr government initiative for capacity building. In late 1990s, the government established a high level Capacity Building Coordinating Committee chaired by the Prime Minister. A sub-committee on technical and vocational training and education chaired by the Minister of Commerce and Industry was established in 1991 EC (1998/9 GC) and

included as its members the MOH, MOA, MOE, MOLSA and MWUD. The sub-committee's recommendations were released in 1993 EC (2000/1).

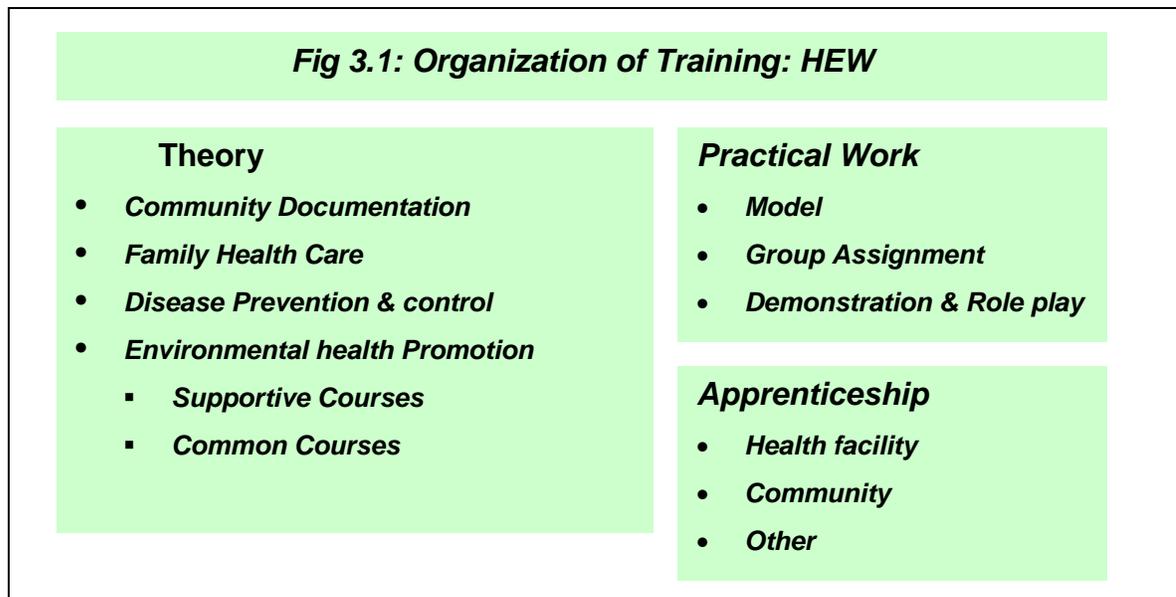
The policy, based on the National Education and Training Policy and human resources requirement of the economy, is to provide technical and vocational training at various levels of instruction.

The proposed levels of TVE are:

- Junior: below 10<sup>th</sup> grade of formal education, mostly informal
- Middle level Certificate Level - I, 10<sup>th</sup> grade + 1 year (HEW level)
- Middle level Certificate Level - II, 10<sup>th</sup> grade + 2 years
- Middle level Diploma Level - 10<sup>th</sup> grade + 3 years

It is envisioned that courses will be primarily practical (70%). Core courses will be presented in a modular format to enable students to gain a particular set of skills, which may form the basis for ongoing skill development. There will also be common courses geared towards future career development.

The HEW Training Program is modeled on industrial TVE. The training course is, therefore, geared primarily towards practical work and apprenticeship (Fig 3.1 and Table 3.1).



**Table 3.1: Course Distribution: General (number of hours)**

Courses	Theory	Project Work	Apprenticeship	Total	%
Community Documentation	30	10	20	60	4.3
Family Health Care	190	30	120	340	24.4
Diseases Prevention & Control	115	30	60	205	14.7
Environmental Health Promotion	165	30	112	307	22.2
Support	150			150	10.8
Common	330			330	23.7
<b>Total</b>	<b>980</b>	<b>100</b>	<b>312</b>	<b>1392</b>	<b>100</b>
%	70.4	7.2	22.4		

Source: Curriculum Guide

It is not clear whether the HEW training program uses an appropriate allocation of time or mix of coursework (in terms of core courses, supportive courses, common courses). A more general issue, which was raised by some of the trainers, was whether the industrial model is appropriate for training on health.

### 3.2 Facilities

The TVE strategy sets minimum requirements for facilities including:

- ❖ Training room appropriate for the vocation for 20-30 trainees
- ❖ Room for storing instruments and raw materials
- ❖ Rooms for administration and support services
- ❖ Staff room
- ❖ First aid room
- ❖ Male and female toilet rooms
- ❖ Library

All Technical and Vocational Education and Training Institutes (TVETIs) were found to lack adequate facilities to receive the HEW trainees. They did not have enough time or information to prepare the facilities (see Box 4.1 for an example). All TVETIs were already working under financial,

#### Box 4.1: State of Preparedness: Asela Case Study

- End of 1995EC (Aug. 2003): Director told to prepare 3 classrooms for HEW without any additional information
- Nov. 2003: Students start arriving, but no trainer and no material (Students refuse to return to woredas)
- Mid-Dec: Orientation on HEP to all TVET Directors by MOH – promised to solve outstanding problems
- Training started but for 3 months no budget (salary & stipend)

*(Report on Study Visit to TVETI)*

human resource and infrastructural constraints for their regular programs; the addition of HEW trainees exacerbated these problems. Organizational arrangements varied from one institution to the other, but often the HEW trainees were perceived as being completely external to the institution.

### ***Inadequate Facilities***

***Classrooms*** were inadequate in almost all centers. Most used classrooms prepared for elementary or secondary school students. In Butajira, classes were taught in temporary corrugated iron structures. Even though the HEP Implementation Guidelines indicated that there should be 20-30 HEW trainees per classroom, TVETIs were asked to provide one room for 50 trainees, and most had much higher number of trainees per room (Table 4.1). Only Dilla had what could be considered adequate conditions in terms of trainees per room. Often, trainees were so crowded they had problems taking notes (see Box 8.1). An extreme example is Axum, where there were enough chairs and desks for only half the trainees, which meant that half of the class had to sit on the floor or on makeshift arrangements (such as stone slabs, etc.).

***Libraries*** were almost nonexistent for the first intake of HEW in all TVETIs (Table 4.1). Some had rooms, but none had books relevant to HEW training. Those with libraries had few books on other vocational subjects, and reading material was generally out of date. Recently some HEW-relevant books (modules, books prepared for health officers, nurses, etc.) have been received. While this is an encouraging development, most training centers have not yet worked out the modalities of their utilization as the contents and numbers of copies vary from less than 10 to over 200. Dilla and Butajira (almost completed) are building very large capacity, multi-purpose library which should be available to trainees at least by next year.

**Information and Communication Technology (ICT)** is included in the program for future career development. Some centers (5 of the 10) have a few computers for the regular TV trainees (Table 4.1), but even there the number of computers is inadequate. Given that in some centers HEW trainees are much larger in number than the rest of the student body, it is unreasonable to expect HEWs and regular TV students to share these inadequate computer facilities. In most centers HEW had no or grossly inadequate hands-on practice on PCs.

**Table 4.1: State of Training Facilities**

TVETI	No. Student	Class-room	Library (capacity)	ICT (PC)	Water /latrine	Demo Room	Practice Site
Axum	200	4*	--	--	?	--	±
Mekele	197	4	±	--	??	--	±
Dessie	396	8	45*	25	++	--	±
D/ Marcos	323	6	-	-	±	?	±
Assela	154	3	50	-	±	50-	±
Fiche	150	6		-		15-	±
Goba	153	3	100	26	++	(2)40-	±
Shashemene	146	3	40	34		#	±
Butajira	375	6	S	45	±	#*	±
Dilla	375	13	S	39	++	#*	±

-- Do not exist, ? Almost inexistent, ± Exists but dubious functionality, # Under preparation, S Small, ++ Adequate

Most trainees had only lectures on ICT and never used a computer. Sometimes, lack of access to PC resulted from TV staff being unwilling to allow HEW trainees to use the facilities. For example, in Dessie, there was an ICT room with 45 PCs, however, there were conflicting report between the TVETI staff and HEW trainers on whether HEWs had access to them.

**Water and latrines** were inadequate in almost all TVETI except Dessie and Dilla. In addition, most of the toilet facilities were very unsanitary. In some centers such as Mekele, we were persuaded not to visit them. The TVETI in Axum was judged to be in the worst condition.

The first group of HEW trainees shared water and latrine facilities of the school in which it was temporarily accommodated.

The current intake of HEW trainees is trying to make do in compounds which are still under construction, and which are yet to have water and electricity. The toilet facilities cannot be used because the water system is not yet connected. It seems that major additional funds will be required to get water to the TVETI compound, as it is far from the town and public utilities. These

**Box 4.2: Field assignment – Apprenticeship in Axum**

Students were assigned to woredas for their apprenticeship. Initially, work assignment and supervision was assumed to be given by trainers who were assigned a number of trainees and areas. The clinics/HCs in the area were expected to collaborate. The Nursing School was also involved in the supervision of the apprenticeship.

The first month of the apprenticeship program was mismanaged and a lot of trainees lost a month sitting around clinics/HC. Remedial measures (see Mekele) were taken; the period lengthened by a month and the situation has reportedly improved. The trainees we met reported adequate exposure and practice in all but delivery.

unsanitary conditions should not be tolerated by HEW trainers and trainees, especially since they are expected to promote better environmental conditions in rural areas.

***Practice Materials and Apprenticeships:*** For programs oriented towards field work, practical training was minimal. Some TVETIs had assigned rooms for demonstration (e.g. Asela, Goba has two rooms as shown in Table 4.1) but none had demonstration materials. In some cases, (e.g. Debre Marcos and Dilla) the trainers and trainees have tried to build their own models from local materials. A few institutions (e.g. Mekele and Butajira) borrowed demonstration materials from nearby health professional training facilities. However, the continuity of this support is highly questionable as these facilities are themselves under-resourced and these materials are considered very precious. Some centers (e.g. Axum, Butajira, Dilla) are now trying to purchase some models but find that they are not readily available in the market and take a considerable amount of time to order from abroad.

Arrangements for practice in the field (i.e. apprenticeship in health facilities and kebeles) were made late and therefore had problems (Box 4.2 for example). Issues of whether HEWs would undertake field placements in HCs or even hospitals were not resolved until the last minute. The first apprenticeship assignment had, therefore, a lot of problems. Accordingly all regions, except Oromia, extended the apprenticeship by a month and took drastic remedial measures.

### 3.3 Selection and Recruitment of Trainees

The selection criteria for HEW trainees varied slightly from document to document (see Box 5.1. for example) and between regions. However, the core criteria include:

**Sex:** All female -- this has been strictly adhered to in all regions.

#### ***Box 5.1: Selection Criteria According to the Curriculum***

Candidates who will join the programme are females, and expected to have successfully completed grade 10 general education with the following profile:

- They are mentally and physically mature to involve in human care.
- They are ready for advancement through technical and vocational training owing to their acquisition of general knowledge in which theory is linked with practice
- They are conscious of their responsibilities and ready to fight social ills and malpractices.
- They are capable to be involved in community health activities and on the job training.
- They can actively (*sic*) participate in different activities such as social meetings, discussions and community development activities.

*Source: Curriculum Guide*

**Completed 10th grade of general education:** This was fully adhered to. In fact, quite a high number have completed 12<sup>th</sup> grade. However, there was no limit to the number of years out of school. Consequently, there are a large number of trainees who have been out of school for many years and had difficulty in following the training program.

**From the kebele of future assignment (or neighboring kebele or woreda):**

This was not adhered to in most cases as very few HEW trainees were recruited from the kebele proper. A large number are from towns because of lack of appropriate educational candidates from rural kebeles, but more importantly, because of flaws in the selection process (see "Selection Process" below).

**Language:** Speaking the language of the community/region seems to be presumed in most regions; only SNNP had 'speak the language of the kebele' as explicit criteria. However, ensuring that these criteria are met during the HEWs' assignment will not be an easy task since most trainees have been recruited from urban areas.

**Other criteria:** (mentally/physically sound, active participant, etc): There was no age limit so some trainees over age 30 have been recruited. This had led to a number of difficulties in training as some have children and other family responsibilities. The mentally and physically sound criteria were not rigorously applied as there was, in most cases, no medical check-up.

The **Selection Process** as a rule is supposed to start at the kebele level; the Kebele Council, in collaboration with the Woreda, should carry out the recruitment according to the selection criteria in collaboration (presumably in cases where there are no kebele candidates).

In practice, at least for the first intake, trainee selection was carried out primarily by the Woreda Committee chaired by Capacity Building with the WHO and WEO as members.

**Box 5.2: Selection Issues, Illustration from the case in Mekele**

Two hundred HEWs were recruited for Mekele; three defaulted and 197 are completing the training now. Recruitment was done through advertisement in schools, which meant that most recruits are from towns and particularly from towns where there are TVETIs. Thus an important tenet of HEP, **recruitment from the kebele in which they will work after training, has not been adhered to**. The implications of this are difficult to discern now but unless vigilantly followed up and remedial measures prepared, the consequences should not be underestimated.

Although WHOs have membership on the Woreda Committee, most of the WHOs expressed that they were excluded from involvement in the final decisions. Trainees were recruited mostly from woreda towns (Box 5.2 for example), which was prompted essentially by the high number of unemployed youth in these towns.

**Low Grade Point Average:** According to the HEP Implementation Guidelines, the minimum GPA required for admission is 1.2, in order to get students from the rural kebele level. The pool of potential applicants (females possessing an education of grade 10<sup>th</sup> to 12<sup>th</sup> grade) is very large. However, for some reason the HEW training program does not seem to have attracted the better students. One reason was that recruitment of the first intake started late and the better students were already enrolled in the other fields. In other cases, the potential trainees seem to prefer other areas such as education. Stipends may be a factor in the preference of potential applicants to other fields. Other factors need to be explored since the trend of attracting less qualified applicants has continued for the second intake.

**No medical examination:** In almost all centers, a sizable number of women of who are age 30 or above have been recruited. Most of these have been out of school for a long time and have difficulty following the courses. A number were also married and with children left at home. This has impacted on the learning process and is bound to impact on future assignment.

There was no medical check up during recruitment, consequently there are a number of handicapped and pregnant women<sup>1</sup> and this has created problems during the training period. More importantly, the trainers are concerned on the impact of this on their future work.

***Inadequate orientation:***

Orientation on the HEP and on the role of HEW was not adequate on

***Box 7.1: The NO-Stipend Problem:  
Illustration from Dessie***

Most trainees are said to be from poor families. Families reportedly had to sell oxen or whatever valuables they have to pay for their training. Most find it difficult to meet the requirements for the whole year. As no support is given (dormitory, food or cash) by the government and living expenses (such as house/room rent and cost of food) are high in Dessie, most trainees find it difficult to cope. There are reports that a number work at night to supplement their income. A number come to class without taking a decent meal and faint. . There are reportedly a number who would have left but the Institute holds their 10th grade certificate.

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<sup>1</sup> Reportedly, there was some sort of medical check up in SNNP but this does not seem to have solved the problem.

recruitment. Most trainees seem to consider being a HEW as only a stepping stone to becoming a nurse. Some of them claim that they have been promised as such during orientation. However, all have been clearly informed that they will be working in rural kebeles and have, except in Tigray, signed agreements to serve in kebeles.

***Stipend:*** Because no stipend is provided to trainees in Tigray and Amhara, the majority of them have suffered serious hardship. A number of them were forced to do odd jobs, mostly at night, to meet costs; a number go hungry to classes and have difficulties following the program (Box 7.1). On the other hand, Oromia gives B135 per month and SNNP gives B200 per month, which greatly reduces these hardships. The provision of stipends is apparently a well-established practice in teacher training.

***High commitment and willingness to work in rural areas:*** There is little attrition (about 1%) in spite of the various problems trainees are facing. Most say they are committed to work in kebeles and change the life of villagers. Even trainees who were recruited from the towns believe they can adapt easily to rural community life, as most have moved to towns only recently.

### **3.4 Trainers**

The curriculum guidelines specify that:

“For the training programme, the principal facilitator must be Bsc (sic) Nurse and she or he will be assisted by Bsc/diploma nurses. Preference will be given to those with managerial and teaching skills. Diploma nurses or sanitarians (sic) will be posted as instructors in demonstration rooms, clinics, health centres and at kebeles. Each training programme will have a minimum of two full time facilitators.”

These guidelines do not provide a clear picture of the number or types of trainers needed in the classroom, and therefore not clear regarding the trainer requirements. The above statement seems to imply that there should be as many trainers as demonstration rooms, clinics, etc.

The TV Strategy indicates that trainers should have a minimum of diploma-level training. Our findings show (Table 6.1) that all trainers are full-time, mostly sanitarians (43%) and

public health nurses (41%). There were very few female trainers (11%) or degree holders (6%). An interesting finding was that in most centers there is a home-science teacher, who covers the nutrition and related subjects.

In most cases the trainers were inadequate in number (Table 6.1). On average, there were 37 trainees per trainer. In Oromia the ratio of trainees to trainers was very good (30:1), where as in Tigray and SNNP the ratios were 50:1 or even higher. It is clear when the ratio of trainers to trainees is very high, trainers cannot interact sufficiently with individual trainees nor adequately guide their development. Trainers complained that they could hardly recognize the students let alone monitor their development.

**Table 6.1: Number of Trainers by Qualification**

<i>TVETI</i>	<i>Student</i>	<i>HO</i>	<i>PHN</i>	<i>Sanitarian</i>	<i>Other</i>	<i>Total</i>	<i>Notes</i>
<i>Axum</i>	200	1	1	2	-	4	1 ♀, 1°
<i>Mekele</i>	197	1	1	2	-	4	1 ♀, 1°
<i>Dessie</i>	396	-	5	5	1	11	1 ♀, 0°
<i>D Marcos</i>	323	-	6	7	1	14	1 ♀, 1°
<i>Assela</i>	154	-	2	2	1	5	-
<i>Fiche</i>	150	-	2	2	1	5	0 ♀, 0°
<i>Goba</i>	153	-	2	2	1	5	0 ♀, 0°
<i>Shashemene</i>	146		3	3	1	7	-
<i>Butajira</i>	349		2	2	1	5	1 ♀, 0°
<i>Dilla</i>	349		3	3		6	2 ♀, 1°

♀ Female, °Degree holder

Another consequence of the shortage of trainers is the very high load each had to carry. Most teach 7-8 hours a day, often on subjects for which they feel ill-prepared. They could not conduct small group activities such as group discussions, role play, etc. Their limited number also makes supervision during practical and apprenticeship very difficult.

### ***Varying top-up policy***

Amhara and SNNP do not give any salary top-up to trainers while Oromia and Tigray provide 300 Birr per month. This has led to resentment among the trainers in Amhara and SNNP as they are well aware of the practices in the other regions. They have repeatedly petitioned the TVE Commission, and recently, trainers from Dessie and Butajirra have gone on strike in protest of this and other issues. Negotiations are underway and, at least in SNNP, a solution seems at hand.

### ***Uncertainty about the future***

Uncertainty about the future is one of the most critical problems of the program. The trainers were recruited from the health sector and – except for Tigray where their employment status is still under the RHB – have been transferred to the Commission of TVE. This means that they are no longer in the government health sector's employment structure and are not considered for staff benefits such as in-service training, upgrading, and free medical treatment. Trainers stated that they felt that they are being bypassed for these opportunities – only two participated in short workshops during the year<sup>2</sup>. This could have a negative effect on their future career development.

In addition, the trainers are also excluded from the employment structure of the Technical and Vocational Education and Training Commission. Since the HEW trainer position is considered a temporary assignment, they do not know how they will fare after the training 'campaign' is over after 3-4 years. In general, they feel caught between TVE Commission and RHB and are apprehensive about the future. Due to this uncertainty, there is tension between trainers and management in almost all TVETI. As noted above, during our assessment, the trainers in Dessie and Butajira were on or returning from strikes. These are bound to affect the training programs negatively unless remedial measures are taken immediately.

One observes a high degree of commitment among the trainers in spite of the problems cited above. All understand clearly the policy and implementation principles of the HEP and seem quite committed to it despite implementation problems and their own grievances. All trainers underwent a one-month TOT (training of trainers) program organized by the FMOH. (TOT for the second group of trainers consisted of 115 people.)

All trainers appreciate the training methodology but question the wisdom in the use of foreign trainers. They believe that the TOT was good in preparing them for their tasks, but all groups independently stated that training would have been more effective if it had been given by Ethiopians who would have been more sensitive to issues in the cultural context. There also seems to have been some language problems during the

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<sup>2</sup> In one TVETI at least, this aspiration by HEW trainers seemed to be misunderstood by other Institute staff as the (non-higher) education sector is used to such opportunities during break periods only.

training. Participants in the second TOT training, both from Tigray and SNNP cited the example of an Ethiopian TOT, from the Debrezeit Institute, who provided more instruction in one day "than what the others have in a month."

### 3.5 Teaching/Learning Conditions

#### *No proper planning of the training process*

The curriculum guide provides a very general sense of the sequencing of the courses. However, there are no detailed guidelines on programming, which seems to have been left to the discretion of the trainers themselves. Their limited number, limited training experience and the fact that they have to depend on others for all the common courses and most of the supportive courses has made course programming a difficult task for trainers.

#### ***Box 8.1: Overcrowding: Illustration from Mekele***

The student/trainer ratio is high and classes for theoretical presentations are crowded. In the class room we visited, students were seated four to a desk, which was designed for three children, and were hardly able take notes. The teaching/learning process is constrained in general and effective practical work involving each student is almost impossible. In health education, for example, it is almost impossible to give each student adequate experience in each topic area within the classroom setting. Adequate supervision of the apprenticeship program by the staff was very difficult because of the number of students, the number of kebeles they were assigned to, and the distances involved.

The situation in Mekele is a good illustration. As the coordinator for the second intake said, "We [the trainers] have worked out our plans but those who direct the program have no plan." They have no guidelines on registration of students, sequencing the courses, on practicals, on the apprenticeship program, etc. The common courses, which should have been given prior to starting the other courses have not been started because of apparent budgetary constraints (the TVETI staff would have to be paid), or because there are not enough TVETI teachers.

In Butajira, they are trying what they call a 'self-contained' method in which a trainer handles all the main courses for a class of trainees. While this approach may have some merits, it may also detract from the quality of instructions in a number of fields, which require experience and expertise. In practice, this approach has meant that instructors are teaching outside their area of expertise, such as a public health nurse teaching and giving practicals on sanitation or an environmental health technician teaching family health.

### ***Language of instruction: English problematic***

Most trainees were clearly not able to follow the course in English due to their limited use of this language, poor educational background and/or the fact that they have been out of school for many years. A large number were unable to understand standard written text in English. The usual practice was for the trainer to write the text on the black board in English for students to copy; otherwise explanations (and discussion if any) were carried out in Amharic or the regional language. Both trainees and trainers emphatically suggested that the courses should be given in the local language.

### ***Educational materials almost nonexistent***

The first intake of trainees had no books of any kind. Single copies of the modules were available only for the trainers. In some TVETI the staff duplicated their notes for distribution but these were often limited in number due to a lack of paper, etc. Most trainees left the centers with the notes copied from the blackboards alone.

### ***Practical training is missing***

The curriculum prescribed 70% practical training but, in almost all cases, there were no facilities (demonstration room or models, health services near by etc) available; therefore nearly all the courses were 95% theory. The curriculum includes ICT but few TVETI had adequate IT rooms and most trainees had only theory-based lessons. The few trainees that had actually touched or seen computers had only very limited exposure.

### ***Field assignment/apprenticeship deficient***

In most cases apprenticeships were arranged at the last minute. Supervision and responsibilities were not clearly defined and therefore the trainees did not have enough exposure to procedures they were supposed to carry out. To remedy this situation, an additional month of a better organized apprenticeship was carried out in all regions except Oromia. These supplementary apprenticeships were of markedly better quality, but were still carried out with a great deal of uncertainty.

The experience from Dessie provides a typical illustration of problems with the apprenticeship program for the first intake of trainees. In Dessie, students were assigned to HC and HP in nine woredas for their apprenticeship. Work assignment and supervision was assumed to be given by health workers at service delivery points (SDP) who were supposed to be given orientation on HEP. In most cases, the health workers had little idea of what HEP was or what was expected of them during the apprenticeship. Consequently, a number of trainees wasted almost a month before doing any practical work and others spent most of their time in the outpatient department (OPD) and almost no community work. Some HEWs were, supposedly, 'supervised' by frontline health workers (FLW).

The trainers were not involved in supervision because it was assumed that the professionals in the service delivery points could provide adequate supervision and guidance. At the end, based on an assessment report by UNICEF and MOH, it was decided to extend the apprenticeship by a month, and send the trainees to their woreda of future assignment with clear instructions on what the trainees should be doing and on the responsibilities of the SDPs. The main shortcomings reported by the assessors were lack of adequate exposure and practice in injections (vaccinations, family planning) and in assisting delivery of infants.

The **apprenticeship** was carried out either during the *meher* harvest period (Amhara and Tigray) or the rainy season (SNNP) hampering access to the villagers. (Box 8.2).

### ***Uniform***

In some regions (e.g. Tigray) there was no plan for a uniform. In others (e.g. Amhara), white gowns were ordered at the end of the training period but had not yet been distributed to trainees. In clinical contexts, (the HC, for example) trainees were difficult to distinguish from clients<sup>3</sup>. Many trainees have

#### ***Box 8.2: Wrong timing of apprenticeship: The experience from Axum***

As in Mekele, students were sent for their apprenticeship at the height of the harvesting period. Many households left very early in the morning for the fields and came back very late. It was therefore very difficult for the trainees to work with them for planned activities. Trainees had to go to the households at five o'clock a.m. in order to meet them before they left for the fields. However, the trainees found the farmers in the area very cooperative

<sup>3</sup> One of the heads of WHOs in Amhara remarked that even CBRHAs (Community Based Reproductive Health Agents) have uniforms, boots and umbrellas which distinguish them from and make them attractive to the population.

expressed their desire for white gowns to serve as a uniform for HEWs. However, the appropriateness of white gown for environmental health work/demonstration and preventive health work in general is questioned by others.

### ***Use of local resources***

HEW training programs are clearly under-resourced. In this situation, it would seem logical to try as much as possible to mobilize local resources to support the program. All HEW training TVETIs are located in relatively large towns with a number of government and NGO institutions, including RHB, health professional training facilities, hospitals, HCs, etc. These institutions could be approached for support in terms of teaching staff, demonstration materials, etc. (e.g. Butajira and Mekele have used demonstration materials from nursing schools). Presumably the staff of these institutions is already heavily burdened, while the budgets of the TVETI may not be adequate to cover the additional costs of using these staff. Nevertheless, ways of deriving support from these institutions should be proactively sought.

### **3.6 Budget**

The first intake was not budgeted, but rather relied on extra-budgetary allocations and, in a number of cases, on subsidies from the TVETIs. The health professionals continued to draw their salary mostly from the health sector (their previous place of employment).

It is difficult to get a complete picture of the operational budget of the training program because TVETIs varied in their use of common utilities and resources from other governmental departments. However, it is considered inadequate (Table 9.1). In fact, most TVETIs had to subsidize the HEW training with their internal income. For example in Dessie each student was allocated Birr133.8, but the estimated cost of the training per student was Birr353.5 – the balance was subsidized from the TVETI's internal income.

## **4 FUTURE PLANS**

An attempt was made to assess future plans for HEW in the training program as well as the progress of the program after HEW assignment. The training institutions had just taken or were preparing to take the second intake of

trainees. Woredas should be anticipating the deployment of the first group of HEWs in the field.

**Table 9.1: Budget by Institution 2004 (first Intake)**

TVETI	Student	Salary & Allowance	Operational	Total	Per Student (total/operational)
<i>Axum</i>	200	RHB	50,000		/250
<i>Mekele</i>	197	RHB		NK	-
<i>Dessie</i>	396	149,232	53,000	202,232	511/134
<i>D Marcos</i>	323	-	30,478	-	/94
<i>Assela</i>	154	271,960	11,300*	283,260*	1839/73
<i>Fiche</i>	150	-	-	-	-
<i>Goba</i>	153	41,700	-	-	(273)
<i>Shashemene</i>	146	333,360	-	-	(2283)
<i>Butajira</i>	375	900,000	100,000	1,000,000	2667/267
<i>Dilla</i>	375	954,180	77,500	1,031,680	2751/207

It was therefore important to know the level of planning and readiness at the different levels of the health sector for HEW deployment, particularly at the level of the WHOs.

#### **4.1 Future plan TVETI**

The institutes were not given ample time to do pre-planning to accommodate the HEWs training. There is still ambiguity of the sense of ownership of HEP by TVETIs, as well as the ad hoc relationship between the RHB and TVE Commission. There is clearly a need to improve the orientation and information of the leadership of the TVETI, who are T&V professionals with no health orientation and among whom staff turnover is high. Specifically, they should be prompted to stop treating the HEW as external to their institutes, and become more proactive by using HEW coordinators and the teaching staff in the HEW training program.

#### **4.2 Future plan Woredas and Kebeles**

Woredas seem to be well acquainted with HEP but there is a tendency, even in a 3-man

WHO, to leave HEP to the focal person. There is a need to adequately inform and sensitize kebeles before the assignment of HEW both during apprenticeship and their final assignment. The lessons from the experience during the first apprenticeships should be clearly drawn and inform future deployment.

### ***Adequate budget at woreda level***

All woredas visited had only budgeted for the salary of HEW at least for the remaining months of the fiscal year. There seems to be little awareness/concern for operational budget. However, HEP is bound to impact significantly on the WHOs' operational budget (for logistic support, supportive supervision, etc.) but little thought and preparation seems to have been given to the issue. Given the general budgetary constraints, the program could suffer unless conscious measures are taken urgently (before decisions on the next budget year) both for improved operational budget for WHOs and operational budgets for HPs. If extra-budgetary resources (community, donations, etc.) are envisaged, it must be made explicitly known to all concerned, and sensitization and mobilization of such resources should be started well ahead of the deployment of the HEWs.

### ***Supervision***

As duly stressed in the HEP Implementation Guideline (pgs. 10-12) supervision is key to the success of community-based public health program as shown by experience (CHA, TBA, CBRHA, etc.). From our visits and interviews, however, it is clear that the conditions are far from adequate.

Most woredas are seriously understaffed, operational budget are restrained, and many lack adequate vehicles. There seems to be ambivalence on the nature and magnitude of the involvement of the HC in the supervision of HEWs. Our visit and interviews indicate that WHO officials and HC heads envisage direct and substantial involvement of the HC. Though they have the same constraints as WHOs, HCs constitute significant additional resource in support of HEW both in terms of technical human resource as well as logistic support. However, mixed signals are being sent from the regional and federal level on whether they will participate in the program, and on the nature of their participation.

### **4.3 General**

#### ***Provision of text and reference materials***

The HEWs that graduated recently will be going to their kebeles virtually without any reference materials except their own notes. It is clear that they will be faced with a number of challenges and issues not addressed or adequately articulated during their training. It is therefore important to provide the HPs with simple, practical reference materials in the most important fields preferably in the local language or in Amharic. The MOH has printed the modules and some additional materials both in Amharic and English. It has also developed, through the Carter Center, in association with MOE and USAID a series of 'Lecture Notes for Health Extension Trainees in Ethiopia.' The RHB in Tigray is translating the modules and intends to distribute them to HPs as soon as possible. These are commendable undertakings that should be emulated by other stakeholders. It is now important to get these materials in the hands of HEW as soon as possible. Understandably, most of these materials have been prepared in haste and need to be evaluated and improved upon. For example, though the Lecture Series contains valuable material, it was prepared by university/college instructors with little exposure to HEP. In addition to the use of English, it is doubtful that the content of some of the subjects could be effectively understood by HEWs.

#### ***Continuing/in-service training for HEW***

The trainees spontaneously raised the issue of upgrading training and hinted they have been promised that they will be given priority for upgrading training to nursing<sup>4</sup>.

The trainees in particular see the need and importance of continuing education and anticipate its early implementation. New developments are bound to come (the role of HEW in ART, the introduction of HEW to stronger tools for community mobilization such as Community Conversations now being adopted by HAPCO, new developments in malaria, the requirements of the New Global Child Survival Partnership, etc). There is a need, therefore, for continuing education as well as remedial measures for some of the

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<sup>4</sup> The TVE Strategy (MOE 2002) seems to trace a career development path including (middle level technician certificate 2) in Public Health Nursing, Clinical Nursing, Midwifery, Sanitation, etc. Since MOH was involved in the development of the strategy, its endorsement is presumed.

deficiencies in pre-service training. The MOE TVE Strategy clearly mandates tracer studies in order to take remedial steps. Continuing education is also necessary for the trainers to keep up with developments. As one of the trainers (Dessie) said, "I hear that there is a change in the drug for malaria but I do not even know its name."

### ***Future training***

Once the campaign training is completed, there will be need to plan for future replacement training of HEW. Future training will be needed to fill HEW posts created by attrition and the creation of new kebeles. This will be a new venture and will have to be will thought out to live up to the HEP expectations. An attrition rate of 5-7% per year (due to marriage, movement into the private/NGO sector, etc....) should be expected, based upon the experience of other health professions<sup>5</sup>. After a few years, it is expected that perhaps 5% of HEWs per year will aspire to upgrading their education and professional status. Tentative numbers of the requirements for the replacement of trainees and training schools based on these assumptions are given in Table 10.1.

***Table 10.1: HEW: Annual Replacement Training Requirement (Possible scenario)***

Region	No. HP 2009	No. of HEW 2009	Annual Replacement requirement			*No. of Schools Required
			Attrition	Upgrading	Total	
Tigray	760	1520	38	38	76	1
Amhara	3652	7304	365	365	730	5
Oromia	5040	10080	504	504	1008	7
SNNP	2942	5884	294	294	588	4
Others	1241	2482	124	124	248	1
<b>Total</b>	<b>13635</b>	<b>27270</b>	<b>1325</b>	<b>1325</b>	<b>2650</b>	<b>18</b>

\* Maximum 150 students per school

There are a number of questions pertinent to recruiting and training replacement HEWs, including:

<sup>5</sup> There are very few data on attrition in public health services in Ethiopia (Evaluation of HSDP I). A recent study (Kombe et al 2005) uses a high 9.6% for MD and a low 3.2% for nurses. These figures are only tentative and aimed at triggering reflection and marshalling the necessary data.

- ❖ How are their replacements to be selected? From which kebeles?
- ❖ Who should run the training program? Should not the health sector play the leading role to avoid some of the shortcomings of the current arrangements<sup>6</sup>?
- ❖ Where will they be trained? The RHB in Tigray is envisaging their training in nursing schools. The strong points for this arrangement are not difficult to see but are they the best place for HEW training focused on prevention and control? Could the numbers involved, at least in the big regions, warrant a dedicated school/training center(s)?

## 5 CONCLUSIONS AND RECOMMENDATIONS

The most encouraging aspect is that most trainees seem genuinely positively disposed towards their assignment, despite not having been recruited from rural kebeles and despite the hard conditions under which they have been trained. The trainers are confident in their training ability, have positive attitudes toward the Health Extension Program (HEP) in general and the training program in particular. The institutes have provided classrooms and a number of other resources, which is an important indication of ownership and commitment to the program.

### *Specific challenges and Recommendations*

**Problem 1.** The selection process was dominated by the Technical and Vocational Education (TVE) sector with minimal involvement of the health sector. Most trainees were selected from woreda towns (not rural kebeles) and this could have a distorting effect in the future development of the HEP. Another major weakness is that the program seems to have attracted trainees with much lower grades compared, for example, to those in the regular TVE programs. This has been compounded by the adverse learning conditions and, in the case of Amhara and Tigray, living conditions (no stipend).

**Recommendations:** Involve the TVETIs more actively in the planning of future intakes and involve them more closely in issues/decisions related to HEW training

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<sup>6</sup> The TVE Strategy had mandated the training of HEW to the health sector.

e.g. improvement of the teaching/learning process, preparation for apprenticeship, and status of trainers.

- Start recruitment as early as feasible so as to attract students with better GPA
- Give more firm and clear guidelines on selection; make sure it starts at kebele level and make it as participatory and transparent as possible
- Involve Woreda Health Offices (WHOs) more actively with a clear mandate in the selection process
- Study the possibility of introducing a stipend (Amhara & Tigray)

**Problem 2.** The trainers are too few in numbers and therefore are overloaded. They feel insecure about their status as they feel lost between the TVE and the health sectors.

**Recommendations:**

- Increase the number of trainers significantly to decrease their load
- Make their employment status (duties and privileges) clear and compatible with their future career development

**Problem 3.** The teaching/learning process suffers from the lack of textbooks, reference materials, inadequate practical/demonstration facilities and a compromised apprenticeship program in spite of last minute remedial efforts. The operational budget was clearly inadequate. The issue of uniforms for trainees and eventually HEWs needs to be clarified. There are a number of resources at the local level (health workers training institutions, RHB, WHOs, HC) which could be tapped, to a certain degree, to supplement HEW training.

**Recommendations:**

- Provide textbooks to trainees as soon as possible (at least one copy for each Health Post). Start with the modules in Amharic, and eventually prepare materials in other languages
- Organize demonstration rooms with adequate teaching aids
- Organize the apprenticeship program better and design ways for more active supervision by trainers, WHOs & the HC; as much as possible, avoid the peak harvest or rainy season
- Increase operational budget

- Strengthen relationship with stakeholders and mobilize local resources to support the training program.

**Problem 4.** The first group of HEWs is being deployed but WHOs and Health Centers in woredas seem ill-prepared to receive and put them effectively to work. Most WHOs do not have adequate staff and budget to ensure proper supervision and support. Only salaries of HEW have been budgeted with no provision for operational expenses for HEP and the additional tasks of WHOs related to the HEP. Community mobilization in support of HEP has hardly started.

**Recommendations:**

- Design clear HEP operational plans, including costs at the WHO level
- Issue clear guidelines for community mobilization in support of the HEP

**Problem 5.** Preparation for future training programs should start immediately. Since deficiencies in the training is still being improved, new HEWs are bound to lack in a number of skills. In addition, they have to be introduced to new assignments (e.g. antiretroviral therapy) and changes in technology (e.g. new drugs for malaria). The issues of upgrading training and future training centers for HEW (to replace attrition etc) should be addressed as soon as possible.

**Recommendations:**

- Prepare clear plans for the remedial/continuing education of HEW
- Establish a mechanism (such as a taskforce or committee) to study and plan upgrading (as appropriate) training and future training centers for HEWs.