EXPANDING OR DILUTING? A REVIEW OF THE HEALTH EXTENSION PROGRAMME IN ETHIOPIA

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Ethiopia

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A thesis submitted in partial fulfilment of the requirement for the degree of

Master of Public Health

By Dawit Kussia Guyallo, Ethiopia

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Dedication

To my wife Tseganesh

And children

Yonatan and Gedeon

Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
CHCs	Community Health Compounds
CHO	Community Health Officers
CHPS	Community-based Health Planning and Services
CHWs	Community Health Workers
CNHDE	Centre for National Health Development Ethiopia
CSA	Central Statistical Authority
DOTS	Directly Observed Therapy, Short-course
E.C	Ethiopian Calendar
EC	European Commission
EDHS	Ethiopia Demographic and Health Survey
EFY	Ethiopian Fiscal Year
EU	European Union
FDRE	Federal Democratic Republic of Ethiopia
FHD	Family Health Department
FMOH	Federal Ministry of Health
FP	Family Planning
GAVI	Global Alliance for Vaccines and Immunisation
GDP	Gross Domestic Product
GHS	Ghana Health Service
HAPCO	HIV/AIDS Prevention and Control Office
HEEC	Health Extension and Education Centre

HEP	Health Extension Programme
HEWs	Health Extension Workers
HSDP	Health Sector Development Programme
ITNs	Insecticide Treated Nets
KM	Kilometres
LLITNs	Long Lasting Insecticide Treated Nets
MTR	Midterm Review
OPD	Outpatient Department
PCC	Population Census Commission
PHC	Primary Health Care
PNC	Postnatal Care
PPD	Planning and Programming Department
PPME	Policy Planning Monitoring and Evaluation
SNNPR	Southern Nations, Nationalities and Peoples' Region
SPH	School of Public Health
TBAs	Traditional Birth attendants
TVETS	Technical and Vocational Education Training Schools
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	USA Dollars
VHCs	Village Health Committees
WHO	World Health Organisation

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Abstract

Problem: The Ethiopian government launched a Primary Health Care (PHC) programme called 'Health Extension Programme (HEP)' in 2003 to bring essential preventive, promotive and basic curative services closer to the rural people. However, the programme has faced serious challenges that affect its full success. Several annual performance evaluations and midterm reviews have been carried out to assess the progress of the programme. Unfortunately, the evaluations and reviews are not comprehensive nor based on criteria commonly used to assess the performance of programmes.

Objectives: To systematically review the HEP.

Methodology: The review is based on EC evaluation criteria in order to answer questions that include: How relevant is the HEP? What are its achievements? Does HEP value for money? Is HEP a sustainable programme? To find appropriate answers for the above questions, relevant documents and literatures were reviewed.

Findings: The findings show that HEPs' objectives and packages of services are relevant to the health problems of the country. Nevertheless, skilled care for women and newborn and treatment of pneumonia are not provided by the programme. The HEP has improved the coverage of latrine use, immunisation, family planning and insecticide treated bed nets (ITNs). It has also achieved encouraging results with little financial investment (USD 5.5 per person). A strong government support and community-of-origin-based HEWs selection for employment are found to be very crucial for the sustainability of the programme. However, lack of active community participation and dependence of the HEP on donors' support tend to affect its sustainability.

Conclusions: From the findings, it is plausible to conclude that the HEP is a relevant, effective and efficient programme that needs to be sustained.

Recommendations: For the HEP to be more successful, it is imperative to provide standard skill training on maternal and child care for HEWs, create a conducive working environment for the HEWs, strengthen community participation in planning, implementing, monitoring and evaluating the HEP and enhance Districts' (Woreda) capacity to manage the HEP.

Keywords: Health extension programme, relevance, effectiveness, efficiency, sustainability, programme evaluation, health system performance, Ethiopia

Word count: 14,865

Introduction

Ethiopia is currently implementing an innovative Primary Health Care (henceforth PHC) programme: the "Health Extension Programme"-(henceforth HEP). This programme includes the implementation of promotive, preventive and selected curative services. Female Health Extension Workers (henceforth HEWs) provide these PHC services to households in rural villages ('Kebeles') (FMOH, 2002). The HEP that started as a pilot programme in 94 Kebeles located in five regions (not specified), aims to improve rural peoples' access to essential promotive, preventive and basic curative health services (FMOH, 2003).

An assessment done in the Amhara and SNNP regions shows that Woreda health offices and health centres do not give adequate supportive supervision for the HEWs (HEEC, 2008). Following this assessment, 3,000 HEW supervisors nationwide were selected and trained from health centres. I, the author of this thesis, was one of the trainers of the supervisors training conducted in SNNP region in May 2008. It was during that time that I came to know in-depth the problems associated with the implementation of the HEP. During field training and visits, I observed such things as lack of understanding of the programme among Woreda health authorities and newly assigned HEWs, lack of supplies at health posts, absenteeism of HEWs and absence of transportation and budget to carry supervision. Such observations made me conceive the idea of reviewing the programme, and the opportunity I have got at KIT has made that idea a reality.

I worked in Konso Woreda/District located in SNNP region first as head of Karat health centre from July 1996-Dec 1997 and then as Woreda chief administrator from Jan 1998-Sep 2003. After completing undergraduate study in Jimma University in July 2006, I have been working in Awassa College of Health Sciences as an instructor and registrar since Aug 2006 until I joined KIT for my study.

CHAPTER 1: BACKGROUND INFORMATION

1.1 Geographical Location

Ethiopia is situated in the horn of Africa bordering with Djibouti in the east, with Eritrea in the north, with Sudan in the west and northwest, and with Kenya and Somalia in the south and south east. It has about 1.1 million square kilometres of land size. Altitudes vary between 4,550 meters above sea level (Ras Dashen Mountain) and 110 meters below sea level (the Danakil depression). There are three ecological zones: the hot lowlands, the mid-altitude and the cold high lands. The mean annual temperature ranges from 10^{o}c to 33^{o}c. The annual rain fall is between 500-2000 mm in highlands and 300-700 mm in lowlands. The country is prone to drought and famine due to irregularity of rainfall (PPD FMOH, 2005).

1.2 Population

According to the 2007 Housing and Population result, Ethiopia has a population of 73,918,505, of which 50.5% are males and 49.5% are females. This gives a population density of 67 per square km. Large proportion of the population comprises the young age group. The composition of age groups in percentage is as follows: <15 years is 45%, 15-64 years 51.9%, and ≥64 years 3.2%. The average annual population growth rate between 1994 and 2007 was 2.6% (FDRE PCC, 2008). The total fertility rate of the country is 5.4 births per women (EDHS, 2005).

1.3 Administrative Structure

The country's Federal government comprises nine regional states (i.e. Afar, Amhara, Benshangul Gumuz, Gambella, Harari, Oromiya, SNNP, Somali and Tigray) and two city administrations (i.e. Addis Ababa and Dire Dawa). There are 611 Districts/Woredas that consist of about 15,000 Kebeles (the lower administrative unit). Woredas are the core implementers of the government policy and providers of social services (PPD FMOH, 2005).

1.4 Economic Status

Ethiopia is one of the poorest countries in the world. The country's GDP per capita (PPP USD) in 2006 was 700 which is 110 times less than that of Luxemburg. The country ranks 169^{th} out of 179 countries worldwide according to the Human Development Index (HDI) (UNDP, 2008). A large

proportion of the people are living in extreme poverty. Thirty nine percent of the populations live below USD 1.25 a day and 77.5% below USD 2 a day (World Bank, 2008a).

1.5 Education

The illiteracy rate in Ethiopia is widespread particularly among adults. Only about 40% of adults and 50% of youth are literate. The gross enrolment ratio at primary school in 2007 was 97% for males and 85% for females (UNESCO, 2007).

1.6 Sanitation and Water

The country's water and sanitation condition is extremely poor. The size of population that has access to clean and safe drinking water in 2006 was 42% (urban 96% and rural 31%). Access to an improved sanitation facility was 11% (urban 27% and rural 8%) (WHO, 2009a)

1.7 Gender

Ethiopian women are hardly making independent decision on personal and family health issues. They cannot freely choose a health facility for childbirth or control their births using family planning methods. Harmful traditional practices such as female genital mutilation (FGM), early marriage, forced marriage, and domestic violence are widely practiced. Large family sizes are also affecting the women's reproductive health (Pathfinder International/Ethiopia, 2007).

1.8 Health problems

Ethiopia is one of the countries with highest maternal and child mortality in the world. Maternal mortality ratio of the country is 673/100,000 LB, infant mortality rate 77/1,000 LB and under five mortality 123/1,000 LB (EDHS, 2005). The majority (60-80%) of health problems in the country are due to communicable diseases and nutritional deficiencies (PPD FMOH, 2005). Lower respiratory tract infections, HIV/AIDS, Perinatal conditions, diarrheal diseases and tuberculosis are among the ten top causes of death in all ages in the country. Half of the under five children are stunted, 47.2% are underweight for their age and 15% newborns are born with low birth weight (WHO, 2006).

1.9 Health System Organisation

The Military Government of Ethiopia has organised the health care delivery system into six-tiers during its 10 years health plan (1984/85-1993/94). The system was inefficient in management, referral and support functions (Kloos, 1998). Therefore, a four-tiers health service delivery system was introduced during the health sector development programme one (HSDP I) (PPD FMOH, 2005). A detailed description is included in annex 2.

1.10 Health Care Financing

The government, bilateral and multilateral donors, non-governmental organisations and private (out-of-pocket payments) are the four main sources of finance for the health services (PPD FMOH, 2005). The total expenditure on health in 2007 was 3.8% of the Gross Domestic Product (GDP) which is the lowest in sub-Saharan. The health sector is allotted 10.2% of the total government budget. General government and private expenditures on health cover 58.1% and 4.9% of total expenditure on health respectively. Total Health Expenditure (THE) per capita of the country is only 26 purchasing power parity (PPP) which is 1/145th of that of Denmark (WHO, 2009b).

1.11 Primary Health Care (PHC)

In the past, the country's health service was hospital-based which concentrated highly in urban areas. The first national policy that aimed at reaching the rural people was formulated in 1963. This policy was emphasizing preventive and curative health services through expansion of health centres and stations. However, it failed reaching its objectives due to lack of resources. Later, the socialist government developed its policy in 1976 that focus on ensuring adequate health services for the rural people. Unfortunately, the policy was unsuccessful because of prolonged war, less community participation and centralized health system (Kloos, 1998). The current government developed a new national policy in 1993. The policy gives emphasis on decentralisation of promotive and preventive health care. To translate the policy into action, the government developed a health sector development programme (HSDP) implemented in phases of five years. After evaluation of HSDP-1, the government came with an innovative community based programme called the HEP that was started in 2003 (FMOH, 2002).

CHAPTER 2: THE HEALTH EXTENSION PROGRAMME (HEP)

2.1 Rationale of the HEP

Ethiopia is among the least developed countries in the world. The country has a weak health care system and infrastructure. For example, access to health services is limited, and burden of ill health is high in rural areas where 62 million out of the 73 million (84%) of the total population live (CSA, 2007). In the past, basic health services had not reached the rural population that needed them most (HEEC FMOH, 2007).

Realising that the former health system has failed to meet the health needs of the community at the grass root level, the Federal Ministry of Health (FMOH) launched an innovative approach "the Health Extension Programme (HEP)" in 2003 to improve the health status of the rural community. The HEP is based upon active community involvement in interventions, and focuses mainly on promotive, preventive and some curative health care (see annex 3) that encompasses 80% of the health problems in the country. The HEP targets the underserved rural community in general, and mothers and children in particular.

The HEWs provide the essential health services. They have completed at least grade 10, and are given a one-year training on the implementation of the Essential Health Services Package (EHSP). This EHSP comprises 16 health 'packages'. After taking the EHSP training, HEWs are employed by the Offices of Health at the district of their origin. They are part of the health workforce and are, therefore, paid by the government. The programme is designed to provide accessible essential health services to almost all of the rural people, by the expansion of the health infrastructure (15,000 health posts) and by training of 30,000 HEWs by 2009 (HEEC FMOH, 2007).

2.2 Philosophy and Aim of HEP

The HEP philosophy is based upon the idea that when households are taught health skills and knowledge, they are able to take responsibility and improve-'produce' their own health like they produce agricultural products.

Furthermore, the programme is designed to improve access and equity through the provision of essential health interventions at village and household levels focusing on preventive health actions and increased awareness (HEEC FMOH, 2007).

2.3 Components of HEP

The HEP packages include sixteen essential interventions illustrated in box 1.

Box 1

1. Disease Prevention and Control

- Prevention and care for HIV/AIDS and other sexually transmitted diseases; TB prevention and control
- Malaria prevention and control
- First aid emergency measures

2. Family Health

- Maternal and Child health services
- Family Planning services
- Immunisation
- Nutrition interventions
- Adolescent reproductive health services

3. Hygiene and Environmental Sanitation

- Solid and liquid waste disposal
- Excreta disposal; Promotion of latrine construction and utilization
- Food hygiene and safety measures
- Water supply and safety measures
- Promotion of healthy home environment
- Control of insects and rodents
- Promotion of Personal hygiene

4. Health Education and Communication

- This is a cross-cutting package

Source: HEEC FMOH (2007)

The details of interventions are described in annex 3.

2.4 Programme Management

2.4.1 Planning of the HEP

The HEWs start working in their Kebele by collecting baseline demographic and health data. They then prioritise the health problems in the community with the members of the Kebele council and prepare a health action plan. After the action plan is approved by the Kebele council, the Kebele submits it to the Woreda council for approval. Finally, the approved Woreda plan is disseminated to Woreda Health Office, Regional Health Bureau and Regional Council. The planning is a yearly process (HEEC FMOH, 2007).

2.4.2 Key Activities of HEP

The HEP in Ethiopia is implemented through the following key Activities:

1. Training of Health Extension Workers: Female candidates are recruited based on preset selection criteria (see box 2) and given one year training at Technical and Vocational Education Training Schools (TVETS). These TVETs are managed by Ministry of Education. The respective Regional Health Bureaus give support and follow up the training.

Professional trainers/tutors, who have benefited from a training of trainers (TOTs), give this training. Most of them are sanitarian and public health nurses.

The tutors give theoretical lectures on community documentation, family health care, disease prevention and control and environmental health packages. The HEWs then do in-school practical work by demonstration, role play and group assignments. By the end of the in-school training, they are attached for 2 months apprenticeship in health centres and at community level (Kitaw et al, 2007).

Box 2

SELECTION CRITERIA FOR HEWs

- Sex: Female
- Age: 18 years and above
- Level of education: At least completed grade 10
- Selected from community of future assignment
- Can speak the language of the community
- Physically and mentally healthy and mature

Source: Centre for National Health Development in Ethiopia (2005)

2. Construction of Health Posts: In each Kebele with a population of 5,000 people, health posts are constructed. These serve as an operational centre for HEWs. Regional health Bureaus and Woreda health offices are responsible for the construction of the health posts. The regions support Woredas by providing construction materials. Woredas in turn allocate funds for the construction as a matching fund. The community provides local materials, land, and labour (Chabot, 2008).

3. Procurement of drugs, equipment and supplies: Each health post is equipped with basic drugs, equipments and supplies. These resources enable the HEWs to deliver promotive, preventive and selected curative services that fall under their duties and responsibilities (HEEC FMOH, 2007)

UNICEF has been procuring and distributing the health post kits. It contracted out the distribution of the kits to Population Service International (PSI). Trained staff from the health centres accompanies the distributers and show the HEWs how to assemble and use the equipments (Chabot, 2008).

2.4.3 Implementation of the HEP

The HEWs provide the HEP packages by out-reach services, going house-to-house. They spend most of their time providing health education and promoting environmental sanitation (CNHDE, 2006). The HEP package is made accessible through the following approaches:

1. Training of model families: This approach is based on the innovation diffusion theory which promotes that a new idea is communicated through certain channels among the community members over certain period of time. Accordingly, volunteer families are selected from the community considering their previous involvement in other development activities and their acceptance in the community. After the selection, the model families are trained on health extension packages for 96 hours. When they attend the training hours, and practice the components of the package, they are certified. Only those model families that attend at least 75% of the training hours, and do the practice of the components of the package, are certified. The first trained volunteer families are considered the 'innovators'. They help to communicate health messages to other community members and train other 5-10 model families. Each HEW is expected to train 40-60 model families for four months. In this way, for example, two HEWs can train a total of 240-360 model families per year.

2. Implementation of community based health packages: Community members who are not included in model families and have not received training and house to house service are mobilized to participate and benefit from the HEP packages. They get involved in the programme through different social gatherings and traditional associations. Eventually, they will benefit from model family training at one of the training rounds.

3. Outreach Services: HEWs provide services by outreach programme going house to house. They are expected to spend 75% of their time in outreach activities providing health education on personal hygiene, sanitation, nutrition and counselling on family planning, ANC and immunisation. They also demonstrate on child nutrition, ITNs and latrine use.

4. Health Post Services: Services provided at the health post include immunization, growth monitoring, ANC, delivery, family planning and referral to health centres (HEEC FMOH, 2007).

2.4.4 Roles and Responsibilities

The roles and responsibilities of different health and administrative levels are defined by national decentralisation policies. The higher level bodies develop policy and guidelines, and provide supplies. The lower levels such as Woredas and Kebeles are responsible for planning, implementation and monitoring activities. The details of the roles and responsibilities are described in annex 5.

2.4.5 Intersectoral Collaboration

The HEWs support and work with volunteer community health workers (VCHWs), i.e. community health agents, TBAs, community-based reproductive health agents (CBRHAs) and other health promoters (HEEC FMOH, 2007). They also work closely with school teachers and students, water technicians and agriculture development agents in their Kebele. For example, they promote hygiene and sanitation together with teachers and students (FMOH, 2007a)

2.4.6 Community Participation

The HEP profile document states that the HEP involves the community in planning, monitoring and evaluation of the programme (HEEC FMOH, 2007). In practice, the community participates in the HEP in different ways; it constructs and fences health posts, assigns guardian, selects HEWs and provides housing (HEEC FMOH, 2008).

2.4.7 Monitoring and Evaluation

The HEWs collect information and provide monthly activity reports to the Woreda Health Office, thereby using standard formats. They also present their weekly activity reports to the Kebele administration and evaluate it involving the Kebele Cabinet, health committee and other volunteer community health workers (VCHWs).

A multidisciplinary supervisory team is trained to support and guide the HEWs and to monitor the programme. This team plans and conducts quarterly supervisory visits (HEEC FMOH, 2007). The composition of the supervisory team found at different levels is illustrated in annex 6. However, this supervision design appeared to be not very practical and effective. As a result, a total of 3,000 new supervisors from the health centres of the nationwide were trained to provide supportive supervision to HEWs.

CHAPTER 3: PROBLEM STATEMENT, OBJECTIVES AND METHODOLOGY

3.1 Problem Statement

The health status of Ethiopian population is very poor as compared to other developing countries. An estimated 60-80% of the health problems of the country are due to preventable infectious diseases and nutritional deficiencies (PPD FMOH, 2005). The majority of the country's total population resides in rural areas, and has, as a result of poor health infrastructure, limited access to essential health services (EDHS, 2005).

To address the health problems, the government has developed a national health policy in 1993. The health policy emphasises on the development of equitable health services that reach all segments of the population nationwide. The main focus of the policy is on preventive and promotive health interventions giving special attention to family particularly to women and children (TGE, 1993).

In order to implement the health policy during the next twenty years, the country has developed a 'health sector development programme' (HSDP). The first HSDP was planned and implemented in 1997/98-2001/02 and the second in 2002/03-2004/05. The current third plan covers the period 2005/06-2009/10. The HEP that was introduced after evaluation of the HSDP-1, focuses on promotive, preventive and basic curative services. It targets rural households mainly women and children (FMOH, 2002).

The HEP has improved the utilisation and coverage of some health interventions. An assessment of the implementation of HEP in the Southern region revealed that the HEP has brought improvement in bed net utilisation, immunisation and latrine coverage (Bekele et al, 2008).

A Community-based randomised trial done in Southern Ethiopia showed that HEWs trained on identification of suspects of TB, sputum collection and directly observed treatment (DOT) in the intervention Kebeles has improved smear positive case detection and treatment success rate. This improvement is probably due to better access to the health services in the Kebeles (Datiko et al, 2009)

Although the HEP shows improvements in coverage and utilisation of health interventions, it has been facing a number of challenges that definitely need to be addressed:

- The virtual absence of health posts in some Kebeles, lack of medical equipment and supplies in health posts and a limited number of trained model families (FMOH, 2008a).

- Problematic procedures for the selection of HEWs. In principle, the HEWs are expected to be selected from the community of their origin in order to ensure that they speak the local language and work in that rural community after getting the training (Kitaw et al, 2007). A study on working condition of the HEWs shows that only 8% of the interviewed HEWs were born in the community they are working in. 10% were selected from neighbouring Kebeles and 52% from urban areas (Teklehaimanot et. al, 2007). The reason for selecting HEWs from other areas is to a large extent due to a lack of educated girls from rural community and to unfair selection during the selection process (Kitaw et al, 2007). The selection problems are most likely related with familial relationships and bribes as it is seen as a job opportunity.

- Lack of certain essential skills. Some HEWs lack essential skills, for example in assisting delivery care. An important reason is inadequate practical training during the pre-service training.

- A weak referral system– i.e. the functional relationship of health posts with health centres (Teklehaimanot et. al, 2007).

Midterm and annual programme reviews as well as specific studies done on HEP do not show the underlying causes of the challenges, nor the extent to which the challenges can affect the performance and effectiveness of the programme.

This thesis intends to review the programme, by identifying and examining key factors that determine the HEP's performance. It finally provides recommendations based on findings and experiences from other countries. It is hoped that these recommendations will help to improve HEP performance and outcomes in the country.

3.2 Study Questions

The study questions include:

- How relevant is the HEP? Is it meeting the needs of the community? Is it addressing the major health problems of the community?
- Is HEP achieving its objectives? What are the successes and failures of the programme?
- What resources are allocated to implement the programme? Are they adequate? Are they efficiently used?
- How is the programme being implemented?
- Is HEP a sustainable programme? What determines its sustainability?
- What are the contextual factors that influence the performance of HEP?
- Are there better experiences from other countries or regions within the country?
- What improvements does the programme need, to 'perform' better?

3.3 Objectives of the thesis

3.3.1 General Objective

To systematically review the HEP in the country in order to provide recommendations that help to improve programme performance.

3.3.2 Specific Objectives

- ❖ To assess whether the HEP is based on needs of the community as well as relevant to the major health problems of the community
- ❖ To review the effectiveness of the HEP
- ❖ To review the efficiency of the programme
- ❖ To assess the sustainability of the HEP
- ❖ To assess the contextual factors that influence the programme performance
- ❖ To provide essential recommendations to the programme implementers and policy makers in order to improve the programme performance.

Since the thesis aims to review and identify the major bottlenecks of HEP, and how and why they occurred and provide applicable solutions, it helps to improve the programme performance that will eventually benefit the majority of the rural population of the country.

3.4 Methodology

First, the author reviewed relevant documents on HEP in Ethiopia from MOH reports and documents, national and regional survey reports, NGO reports, and international organisations' reports searching their official websites. Relevant literature also included publications on methods of evaluation of public health programme or interventions. Sources of information included Pub Med and Google Scholar electronic data bases, as well as generic internet search through Google.

To evaluate HEP, the EU evaluation framework was adapted and then used as a conceptual framework (see fig 1).

Conceptual Framework for programme evaluation

The conceptual framework used to review the HEP in the county is adapted from EU activities evaluation framework (2005). The WHO framework for health system performance has also been incorporated to indicate that the final goals of any health interventions or programme are to improve health of the community, to improve responsiveness and to protect the community from catastrophic health expenditures (WHO, 2000). The following definitions of the evaluation criteria have been used:

- Relevance is the extent to which the HEP objectives are based on community health needs and addressing the most important health problems of the country.
- Effectiveness is how far the HEP objectives are achieved.
- Efficiency refers to the extent the programme outcomes are achieved with economical use of resources or at reasonable cost.
- Sustainability is the likelihood of the continuation of HEP positive outcomes as long-term benefits even after the external development assistance has been stopped.

- Context refers to the aspects of larger economic, social, political and policy issues that can influence the overall programme performance.
- Inputs are financial, physical and human resources that used as a means to produce the program outputs.
- Process refers to program activities that are carried out to produce the specific outputs. Intermediate outcomes are immediate effects of the program where as health system goals are the long-term results.
- Outputs are immediate products of the HEP.
- Intermediate outputs (outcomes) are medium-term effects of the programme.
- Health system goals/impact refers to long-term effects produced by the programme.

3.5 Limitations of the Study

Lack of complete data about the HEP and unavailable information on impact of the programme (impact evaluation is not yet done) made the analysis of the programme difficult. However, the author reviews the programme based on available reports and studies done in some regions and Woredas.

Moreover, the author has reviewed the programme based only on literature review and did not engage other stakeholders that have to be involved in programme evaluation.

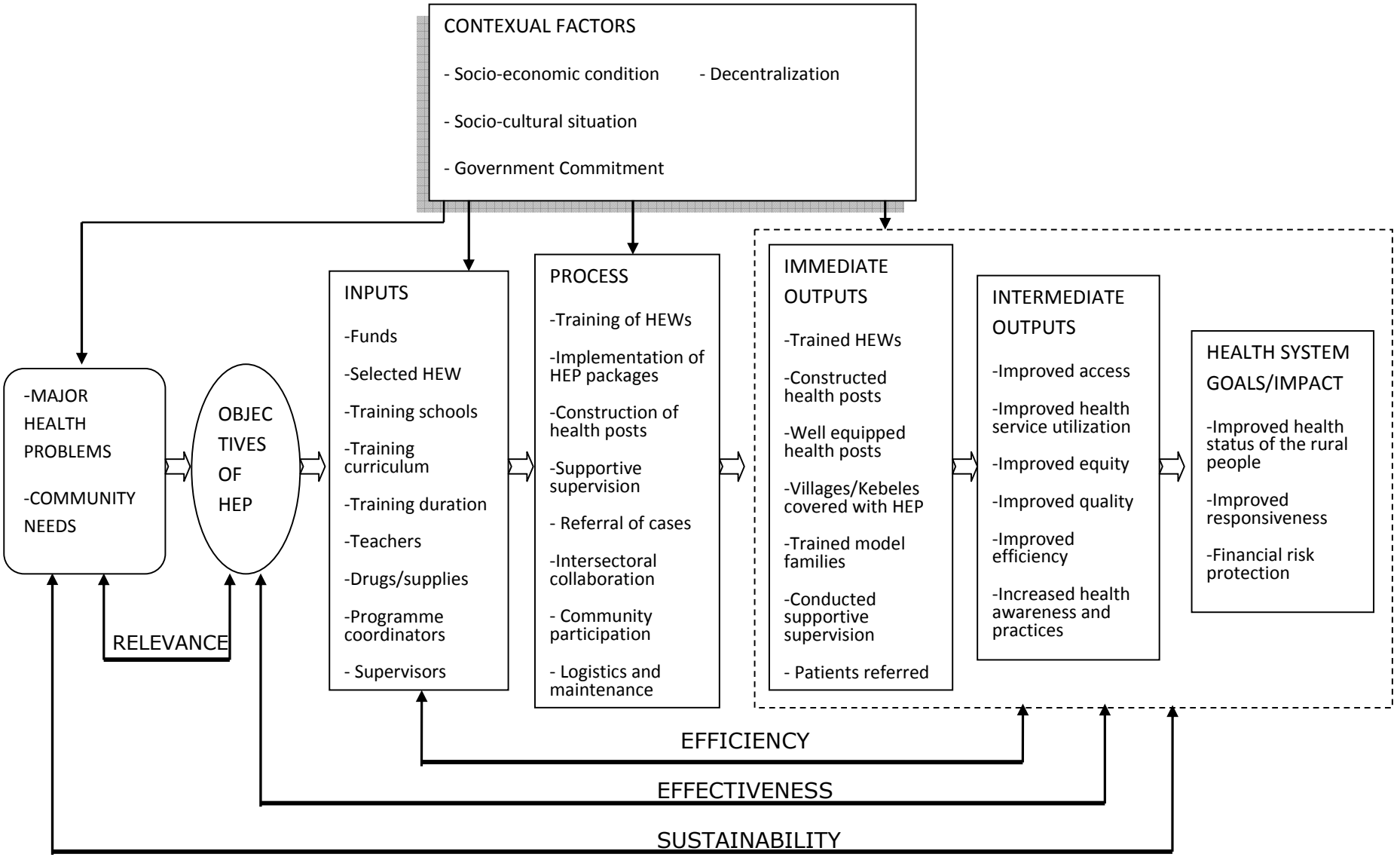

Fig 1 Conceptual framework to review HEP: Adapted from EC evaluation framework (2005)

CHAPTER 4: RESULTS

4.1 Relevance of HEP

The relevance of HEP will be assessed by looking at the extent to which its objectives address the major health problems of the community.

4.1.1 HEP and Health Problems

Public health interventions or programmes should aim at addressing the priority health needs of a community. These can be assessed in different ways. The commonly used approaches are assessment of morbidity and mortality data (epidemiological); community appraisals that involve focus group discussions, priority ranking by the community and interviews (qualitative) (Wright et al, 1998); comparison of service provision in different areas (comparative) and collection of information on knowledge and views of key informants about the healthcare and needs (corporate) (Stevens et al, 1998)

Most of the country's health problems are due to communicable diseases and nutritional deficiencies that are potentially preventable (PPD FMOH, 2005). The common causes of death are presented in the following table.

Table 1 Top ten causes of death in all ages in Ethiopia, 2002

Causes	Deaths (000)	Deaths (%)	Years of Life Lost (%)
All causes	105	100	100
Lower respiratory infections	124	12	14
HIV/AIDS	121	12	12
Perinatal conditions	82	8	10
Diarrhoeal diseases	63	6	7
Tuberculosis	41	4	4
Measles	39	4	5
Cerebrovascular disease	35	3	1
Ischaemic heart disease	32	3	1
Malaria	31	3	4
Syphilis	21	2	2

Source: WHO Mortality Country Fact Sheet (2006)

It is estimated that in the country, 28% of deaths in children under five are attributed to pneumonia, 25% to neonatal complications, 20% to malaria and 20% to diarrhoea (WHO, 2004) See fig 2. Similarly, community assessment carried out in 2000 by Bhattacharyya and Murray in five districts of the Southern regional state shows that malaria, measles, pneumonia and diarrheal diseases are the main child health problems (Bhattacharyya et al, 2000).

Basic health services are lacking particularly in rural areas. For example, the Ethiopia Demographic and Health Survey (EDHS) of 2005 indicates that only 6% of women got assistance from skilled health workers during childbirth. The situation is even worse in rural areas where only 3% got skilled assistance compared to 45% in urban areas. Likewise, the proportion of < 1 year children who were immunised against measles is 35% (65% for urban and 32% for rural. Among women who say they need family planning, the available services have met the need of only 47% in urban areas and 11% in rural areas (EDHS, 2005).

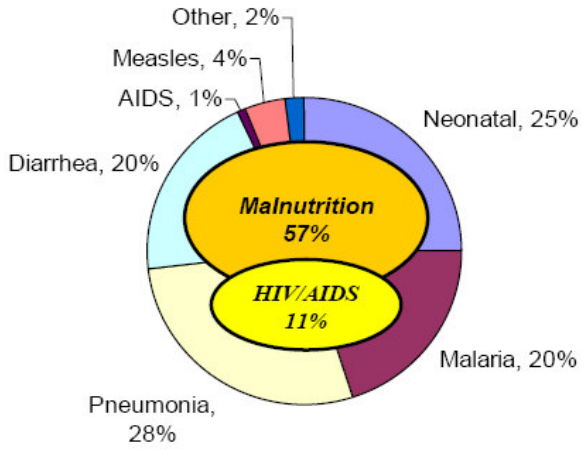

Figure 2 Causes of under-5 deaths in Ethiopia

Source: WHO Child Health in Ethiopia (2004)

In general, the health problems in the country are mainly due to communicable diseases that can be prevented.

4.1.2 Objectives of the HEP

It is important to look at the objectives of the programme and the extent to which these really tackle the identified major health problems of the country.

The overall goal of HEP is to promote a healthy society and to reduce maternal and child morbidity and mortality. The general objectives of the programme are:

- To improve access and equity to and utilisation of essential promotive, preventive and basic curative health services at the village and household levels;
- To promote healthy life style by increasing health awareness, knowledge and skills among the community members;
- To reduce maternal and child mortality and (HEEC FMOH, 2007)

To achieve these objectives, sixteen health packages have been designed under four main intervention areas; disease prevention and control, family health, hygiene and environmental sanitation, and health education and communication (FMOH, 2005a). Details of the health activities in each 16 packages are found in annex 3.

By looking at these health packages and objectives of the programme, it is fair to say that HEP is a relevant programme, since it includes interventions that address the major health problems of the community. However, due to implementation problems, some health problems and community health needs related to child and maternal morbidity and mortality have not been fully addressed. HEW training includes the management of common childhood illnesses. However, the HEWs health activities are limited to the treatment of malaria, of diarrhoea and to nutritional advice to mothers. The reason for this rather limited role is that HEWs are not allowed to use systemic antibiotics according to the essential health services package for Ethiopia (FMOH, 2005b). Therefore, as an example, they simply cannot treat pneumonia; the major killer disease among under-fives.

Another problem concerns the provision of maternity care, particularly delivery and postnatal care. In Ethiopia, 94% of women give birth at home without getting assistance from skilled health professionals (EDHS, 2005). A national assessment conducted in 2007 in six regions (Amhara, Ben.Gumuz, Harari, Oromiya, SNNP, and Tigray) manifests that HEWs did not provide

delivery and postnatal care to mothers because they lacked the necessary skills (Teklehaimanot et al, 2007). In addition, rural women may not trust HEWs to assist them during childbirth because the HEWs are seen as young and inexperienced compared to TBAs. Thus, prevention of maternal deaths through skilled care provision at community level does not get appropriate remedy from the programme.

In rural areas of the country, the disease burden is high. Therefore, a large number of sick people need curative care. Furthermore, people's demand for health care in rural areas is high. Even though it is not the objective of HEP to expand all curative services to Kebeles, this strong community need for curative services puts a challenge to the programme (CNHDE, 2006) In health posts, HEWs can only treat a limited range of diseases (see annex 3). Health posts that are built near or in the villages are supposed to be located within 10 km radius from the health centre. However, studies show that among 50 health posts studied in six regions, 24% are located at 15-19 km and another 24% at >20 km from health centres and Woreda/district health offices (Teklehaimanot et al, 2007). The nearest public health facilities that provide more advanced curative care are health centres. These are often located far from the villages/Kebeles. So far, the HEP has not found an answer to the growing demand for more curative services at the health posts.

4.2 Effectiveness of HEP

In this section, assessment of effectiveness of the HEP is done by comparing its outcomes against objectives/targets.

The aforementioned objectives of the programme are general and, the degree to which these general objectives are being achieved is difficult to measure. To assess the programme effectiveness, the following measurable targets which are relevant to HEP have been selected from the health sector strategic plan (HSDP) III 2005/6-2009/10 and other MOH documents.

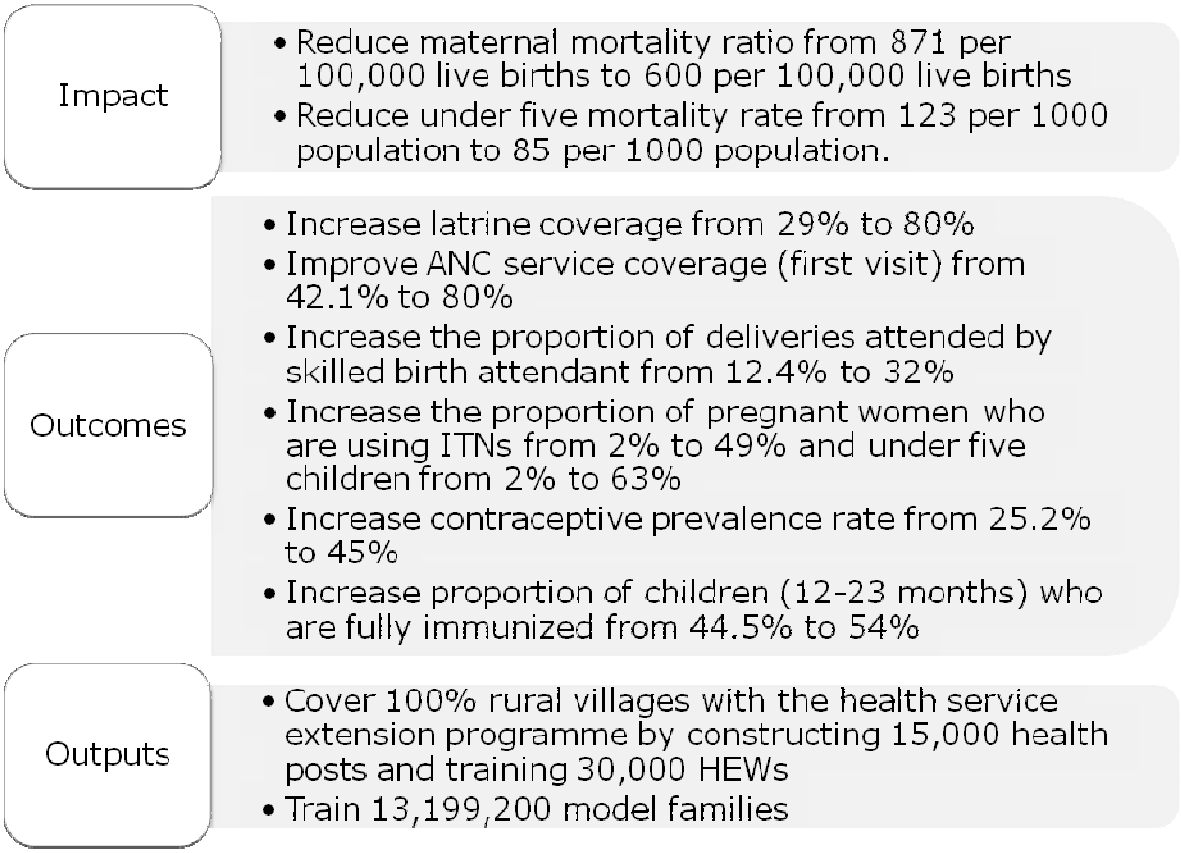

Fig 3 HEP- related targets at different levels of programme results.

Source: FMOH, 2002; PPD FMOH, 2005; HEEC FMOH, 2007

The effectiveness of the programme over the period of five years (2005/6-2009/10) was assessed by comparing programme achievements with the above objectives/targets. However, it must be kept in mind that the degree of achieving these targets cannot be solely attributed to the HEP's performance. Beyond the HEP, there are several other public, private and nongovernmental organisations (NGO's) working on family and child health and disease control programmes. They also work with HEWs at the community level.

4.2.1 Immediate Outputs

Under this section, the effectiveness will be assessed by comparing the immediate outputs (see conceptual framework) against targets (see outputs in fig 3).

- **Rural Villages/Kebeles Implementing HEP**

To improve access and equity to essential health interventions, HSDP III aims at achieving 'universal PHC coverage' by the year 2009. This is mainly through HEP targets which include the training of 30,000 HEWs, placement of two HEWs in each health post and construction of 15,000 health posts (PPD FMOH, 2005). There have been progressive increments in training of HEWs and construction of health posts since 2004/05. According to the 2008 midterm review of HSDP III, a total of 24,534 HEWs (82%) have been trained and assigned in health posts; moreover, 10,998 health posts (73.3%) have been constructed at the national level (Chabot, 2008). The training of HEWs and construction of health posts vary widely from region to region as can be easily observed from the following figure 4.

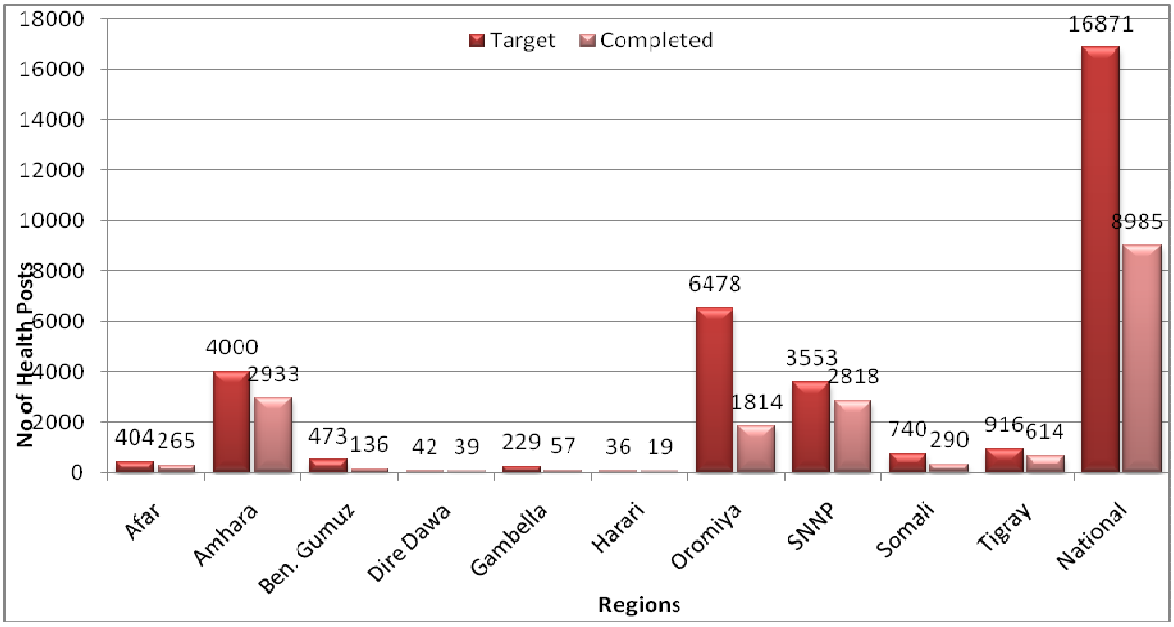

Fig 4 Health posts Target and Construction in Regions, Ethiopia
Source: (Chabot, 2008); FMOH (2008a)

Data on health post construction presented in different reports do not match. The midterm review of HSDP III, for example, reveals that the construction of 7,052 health posts was completed in eight selected regions (Afar, Amhara, Ben. Gumuz, Gambella, Harari, Oromiya, SNNP and Tigray). This report did not include the construction of 1, 930 health posts in two regions (Dire Dawa and Somali). When data of the ten regions are added up, we get a total health posts construction of 8,985 out of the 15,000 HSDP III target. This number (i.e. 8,985) comprises 53.3% of the regional target and

60% of the HSDP III target. Discrepancies in data reporting have also occurred because some regions report health post construction as completed when they sign construction contract with contractors. The review shows that regions such as Oromiya, Gambella, Benshangul-Gumuz and pastoralist zones in SNNPR might not achieve the target of constructing health posts in all rural villages by the end of 2009 (2001 EFY) due to inadequate resource allocation by Woredas, inaccessible Kebeles and lack of construction materials in semi-arid areas (Chabot, 2008).

Table 2 Training and Deployment of HEWs by Region, Ethiopia 2008 (2000 EFY)

Region	Planned Target	Number trained & deployed in 1999 EFY	Number trained & deployed in 2000 EFY	HEWs in EFY 2000			Total trained & deployed	Overall Performance (%)
				Plan	Under training	%		
Tigray	1,235	1,235	-	100	112	112	1,235	100
Afar	336	64	164	150	150	100	228	67
Amhara	6,650	5,950	680	600	382	63.7	6,630	99
Oromia	13,000	5,553	2,884	4,526	4,526	100	8,437	64.9
Somali	1,000	135	420	500	406	81.2	555	55.5
SNNP	7,750	4,465	2,650	0	750	-	7,115	91.8
Benishangul	492	86	120	300	310	103.3	206	41.9
Gambella	205	47	0	158	156	98.7	47	22.9
Harari	39	39	0	0	0	-	39	100
Dire Dawa	79	79	0	0	0	0	79	100
Total	**30,000**	**17,653**	**6,918**	**6,334**	**6,792**	**107**	**24,571**	**81.9**

Source: FMOH (2008a)

Training and deployment data (see table 2) show that some regions such as Amhara, Dire Dawa and Harari have already achieved their target. The remaining regions are expected to achieve their target in 2009 (Chabot, 2008).

Universal coverage of PHC by the end of 2009 is less likely because of the failure of some regions, in particular Oromiya region that encompasses the largest proportion (43%) of health post construction in the HSDP III plan.

Moreover, HEP implementation in rural villages should not be measured only by the number of trained HEWs and constructed health posts. The

implementation and effectiveness of HEP largely depend on functionality of health posts (availability of supplies and equipment), knowledge and skills of HEWs, their motivation and availability at workplace and utilisation of the services by the community. In order for health posts to fully function, they need to be equipped with necessary equipment and furniture. Data from MOH indicates that only 34% of the health posts were fully equipped till 2008 (EFY 2000) (FMOH, 2009) see table 3.

Table 3 Number of Health Posts Fully Equipped, Ethiopia 2008 (2000 EFY)

Regions	Total Number of Health Posts Required, EFY 2001	Cumulative Fully Equipped Health Posts, EFY 2000	Planned New Posts to be Equipped, EFY 2001
Tigray	786	650	136
Afar	256	132	124
Amhara	3853	1398	2455
Oromia	5227	1412	3815
SNNPR	3729	1275	2454
Benishangul Gumuz	240	22	218
Gambella	124	4	120
Somali	740	175	565
Harrari	25	15	10
Dire Dawa	42	23	19
National	15022	5106	9916

Source: FMOH (2009) HEP Health Abstract

It has already been mentioned that HEW's lack of knowledge and skills in certain areas hinders their provision of some of the essential maternal and child health services. Assessments carried out on the availability of HEWs show that they are absent from their work for a number of reasons: lack of commitment, promotional transfer of HEWs from the rural health post to district health office (Bekele et al, 2008), spending 1-2 days per month to collect their salary, spending 3-20 days to attend meetings or in-service trainings and some 3-5 days on sick leave (CNHDE, 2006). Although adequate data on attrition rate are lacking from all regions, the midterm review report reveals that 14% of the HEWs left their job in Dire Dawa region due to lack of willingness to stay and work in rural areas and migration for better job opportunities in urban areas. The attrition rate in

SNNPR is 1.3% and other regions also reported that up to 28% HEWs were on maternity leave (Chabot, 2008).

Although there is no evidence on violence experienced by the HEWs, they might face physical abuse and sexual harassment at their workplace. This could happen more to those HEWs assigned outside their Kebele of origin.

- **Trained model families**

The HEP uses the 'model family training' in order to disseminate health message among the community. This approach is useful to achieve the main objective of the programme-bringing sustained healthy practices and behaviours and increasing health awareness among the community (HEEC FMOH, 2007).

Accordingly, there is a national plan to train 13,199,200 model families. In 2008 alone, 1,756,082 families were to be trained. At the end of the year, 886,208 (50%) got training and certification. The total cumulative number of model families trained so far is less than 10% of the planned number. The HSDP III performance report 2008 also shows that no training has been conducted in three regions (FMOH, 2008a). The overall performance of the training of model families is very poor indeed.

Of course, training model families is not an easy task for the HEWs. The author of this thesis was involved in the HEWs' supervisors training in 2008. He supervised the HEWs' supervisors during their practical attachment at some health posts. He observed that the HEWs had difficulties in training the model families. They reported that they couldn't get a gather of 40-60 female and male household heads at one time to give them the training. They therefore, train individual families during home visit. The individual training takes long time so that they are not able to train the planned number of model families.

- **Conducted Supportive Supervisions**

An assessment in 81 Kebeles located in four districts of Amhara and SNNP regions reveals that two thirds of the HEWs have reported that they do not get adequate support and supportive supervision from Woreda supervisory staff (HEEC, 2008). Therefore, the government trained new HEWs supervisors.

The training of these HEWs supervisors was based on the organization of the PHCU. One supervisor was trained from the health centre to supervise 5 health posts located under that health centre. There is no available data showing the functionality of these supervisors after the training. The 2008 midterm review report shows that supervisors faced transportation and budget constraints to conduct the supervision (Chabot, 2008).

- **Patients Referred to Health Centres**

Among the duties of the HEWs is the referral of patients/clients to the nearest health facilitiy for the services that are not provided at the health post level (FMOH, 2005a). In practice, the referral link between the health posts and health centre is very weak. The health posts do not use a referral form when they refer patients. The HEWs often do not report the number of patients/clients they referred. Teklehaimanot et al. found out that 40% of the HEWs never reported the number of referred cases from their health posts (Teklehaimanot et al, 2007). Another study conducted in ten DOTS Districts of Tigray region indicates that two third of the pulmonary tuberculosis patients have self-reported to health facilities particularly hospitals without any form of referral. The remaining one third got a piece of advice from family members, private providers or community health workers to visit a health facility (Mesfin et al, 2009).

Although there is no well established standard referral system in the country, some project-financed services showed referral of some cases by the HEWs. For example, the prevention of mother to child transmission of HIV/AIDS (PMTCT) project, supported by IntraHealth International in nine regions, had trained 733 HEWs on referral of pregnant women for PMTCT counselling, care and support and follow-up of HIV positive mothers. The end-of-project report shows that the HEWs referred 2,044 pregnant women for ANC, 399 for delivery, 476 for FP and 746 partners for HIV counselling and testing to the health centres between September 2004 and December 2007 (Intrahealth International, 2008). The number of clients referred by the trained HEWs over three years is very small.

4.2.2 Intermediate Outputs

These are programme outputs that are described in the conceptual framework under 'intermediate outputs' and in fig 3 under outcomes.

- **Latrine Coverage**

Lack of access to safe excreta disposal system especially in the rural areas of the country has contributed to a wide spread of excreta-borne diseases (FMOH, 2004a). Not aware about the risk of not using proper sanitation (CSA, 2004), most of the rural population (more than 92%) use the open field for defecation.

Available data show that there has been an increase of latrine coverage since the start of the HEP. The midterm review of HSDP III also illustrates that access to improved sanitation at the national level has increased from 35% in 2005/06 to 50.8% in 2008 (Chabot, 2008). A survey in two Woredas (Mirab Abaya and Alaba) of the SNNPR shows that latrine coverage has increased from 16% to 94% in Mirab Abaya, and 10% to 69% in Alaba from 2002/03 to 2007 due to HEW's promotion of latrine construction and its utilisation. In these Woredas, the utilisation of latrine was 93% among the household (RiPPLE, 2008). Even though the achievement of latrine coverage is encouraging, achieving the national 80% target by the year 2009/10 is not likely.

- **Coverage of Maternal Health Services**

The HEWs are expected to provide antenatal, delivery and postnatal cares to mothers at the health post level (see annex 3). The coverage of antenatal care is better as compared to other maternal care services (see fig 5). The coverage data presented in figure 5 below is based on routine HMIS reports provided by the health facilities. The ESHE survey report indicates that the coverage of antenatal care, assisted deliveries and postnatal care in three regions (Oromiya, Amhara and SNNP) in 2008 was 56%, 7% and 8% respectively (ESHE, 2008). The coverage result obtained from routine reporting by facilities is higher than the ESHE survey report which appears to be due to over reporting. The reason for low coverage of delivery and postnatal care could be due to inadequate skill of HEWs in delivery and postnatal care (Teklehaimanot et al, 2007).

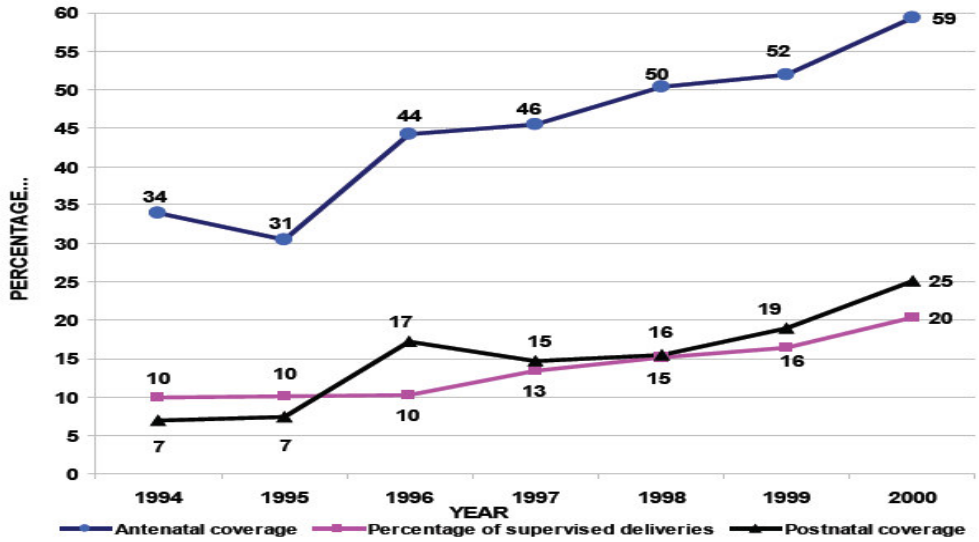

Fig 5 Trends in ANC, proportion of deliveries assisted by skilled health workers and postnatal care coverage, Ethiopia 2002-2008 (1994-2000 E.C)

Source: FMOH Ethiopia HSDP III annual performance report (2008)

Regarding family planning, the annual performance report of HSDP III shows that the Contraceptive Prevalence Rate (CPR) increased from 25% in 2005 to 51% in 2008 (FMOH, 2008a). The performance is above the target of achieving 45% in 2009/10. However, ESHE survey report indicates that the CPR in the three big regions (Oromiya, Amahara and SNNPR) was 29% in 2008. The high performance report from health facilities could be due to the same reason mentioned above. Nevertheless, the improvement in FP coverage is seen following the introduction of the HEP (Pathfinder International/Ethiopia, 2009)

- **Immunisation Coverage**

HSDP-III data shows that there has been progressive increment in immunisation coverage over the past six years (2003-2008) except for the year 2007. As from 2006, there was a slight decline because of low performance in Amhara and SNNP regions (FMOH, 2007b). The coverage for DPT3, measles and fully immunised children is shown in fig 6. The immunisation coverage is above the target (except for measles) for the year 2009/10. This promising achievement is mainly due to better access to HEW services (Chabot, 2008).

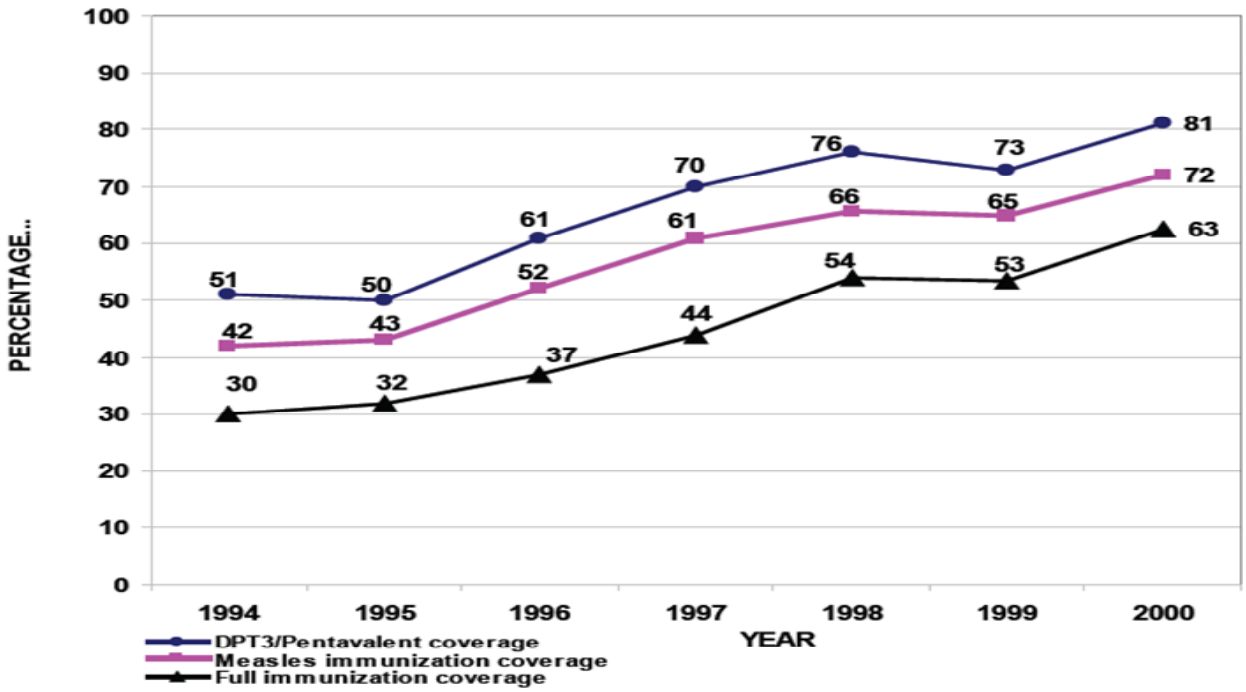

Fig 6 Trends in child immunisation in Ethiopia 2002-2008 (1994-2000 E.C) Source: FMOH (2008a)

- **Prevention and Control of Communicable Disease**

One of the HSDP III strategies is preventing and controlling major health problems that include malaria, tuberculosis and HIV through HEP (FMOH, 2005). The activities of the HEWs in malaria prevention and control include the distribution of ITNs, and diagnosis and treatment of malaria cases (see annex 3). The HEWs use Rapid Diagnostic Test (RDT) for the diagnosis and Arthemesin combination therapy (ACT) for the treatment of P. falciparum malaria. They are also responsible for the follow up of ITNs utilisation by households. In line with this, there has been a rapid scale-up of ITNs distribution since 2004 (See fig 7). In the year 2008, over 20 million ITNs were distributed to about 70% of households in the country. The scale-up interventions are mainly integrated with the HEP (Chabot, 2008).

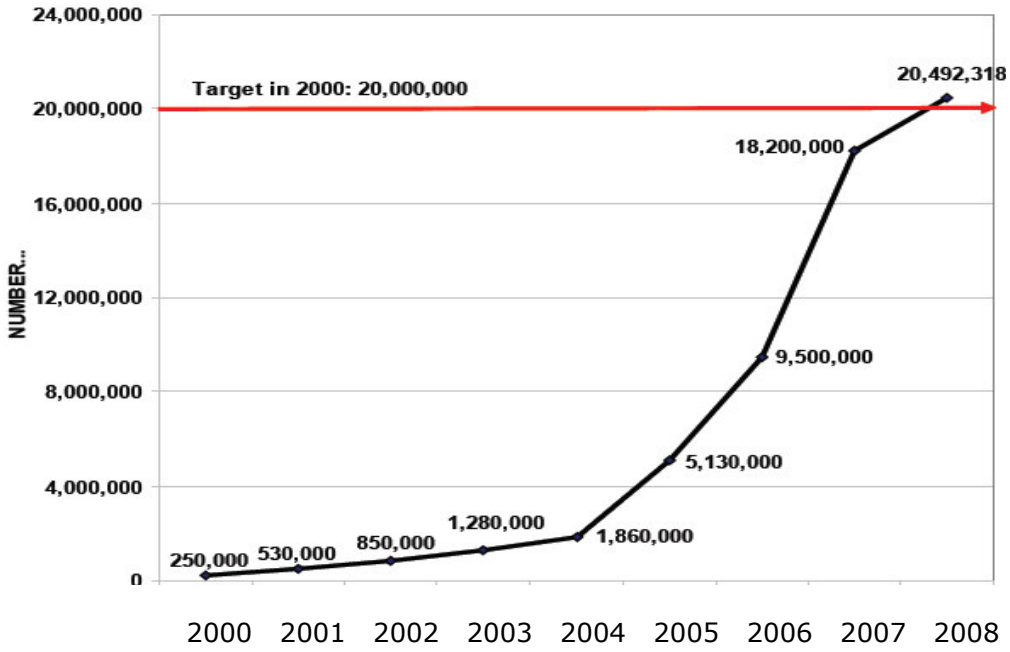

Fig 7 Trends in distribution of ITNs from 2000-2008, Ethiopia

Source: FMOH (2008a)

Various studies have shown that the ITNs utilisation is encouraging. The national malaria indicator survey (MIS) conducted by MOH in 2007 showed that 41% of children less than five years of age, and 65% of pregnant women in malaria risk areas were reported to have slept under the ITNs the night preceding the survey (FMOH, 2008b).

Other studies on small study-case areas also reveal that there has been improvement in ITNs utilisation. A study in two districts in Oromiya and SNNP regions shows that 64.7% of respondents reported that they sleep consistently under the ITNs. The proportion of respondents who actually hanged bed nets inside their house, however, was 50.4% (Fettene et al, 2008). Moreover, a study by Shargie et al (2008) in the two regions portrays that 35.4% (95% CI 24.4%-48.1%) participants reported that they spent the night preceding the study under the mosquito bed nets. The study adds that the use of bed net among children less than five years of age was 40.1% (95% CI 27.3%-54.4%), and 42.9% (95% CI 30.0%-57%) among pregnant women. Furthermore, a study conducted in Samre District in Tigray region indicates that among 1,650 interviewed mothers, 86% reported that they have bed nets. Yet, the proportional figure differed on the

basis of various parameters: 18.2% interviewed mothers reported that they used bed nets throughout the year, 42% after the rainy season, and 44% during the rainy season (Paulander et al, 2009).

With reference to HIV prevention, it is worth mentioning that the role of HEWs is mobilising community in order to improve access to HIV prevention, care and treatment services. They are also expected to organise and facilitate community conversation (CC) on HIV twice in a month in their Kebele. The Federal HIV/AIDS prevention and Control office (HAPCO) report of 2008 shows that in the year 2006/07, the CC was conducted only in 30% of the total Kebeles nationwide (FDRE HAPCO, 2008).

Although the in-service training given for HEWs improved case detection rate for TB (Datiko et al, 2009), the national case detection rate was 34% in 2008 which is much lower than the target plan of 60%. Lack of community awareness, poor case finding and delayed referral of suspected cases by the HEWs are among the reasons for the low performance (FMOH, 2008a)

Existing resources contain no concrete information about the HEP having contributed to the prevention and control of tuberculosis and HIV.

Hospital-based studies indicate that a significant proportion of HIV and TB patients discontinue their treatment. For instance, among 1,270 patients who had antiretroviral treatment between January 2005 and February 2007 in Jimma University Specialised hospital, 173 (13.6%) were defaulted from their treatment (Deribe et al, 2008). Similarly, a study done in Hossana hospital shows that out of 404 smear positive tuberculosis registered for treatment, 81 (20%) discontinued their treatment (Shargie et al, 2007). However, as described under the essential health service package rendered at the community level (see annex 3), the HEWs could have provided a follow up care for patients with chronic diseases including TB and HIV.

- **Health Service Utilisation**

Improving the utilisation of peripheral health services is one of the objectives of the HEP. The HEWs act as a liaison between the community and the health facilities (HEEC FMOH, 2007). The HSDP III has set a target of increasing per capita health service utilisation rate from 0.30 in 2005 to 0.66 in 2009. Nevertheless, trends over the past seven years show that the outpatient department (OPD) attendance rate per person per year has

remained below 40% (see fig 8). As stated in MOH 2008 report, the low utilisation is due to under reporting of the services provided by the health facilities (FMOH, 2008a). However, other reasons for low OPD attendance rate could include the financial barriers (Deressa w., 2007; Deressa et al, 2007), geographical inaccessibility (Deressa W., 2007) and poor quality of services (FMOH, 2003).

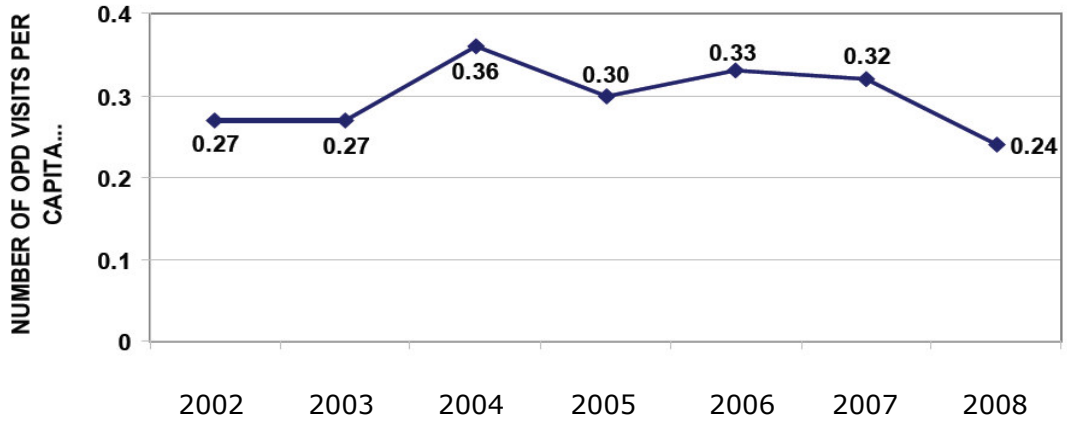

Fig 8 Trend in OPD Attendance per capita, Ethiopia, 2002-2008

Source: FMOH (2008a)

- **Health Awareness and Practices**

The HEWs communicate health messages in the community to increase the awareness, knowledge and the skills of the community members (HEEP FMOH, 2007). More than half of the HEWs spend 30% of their time on health education and 25% on activities of environmental sanitation (Teklehaimanot et al, 2007). For example, in rural Tigray, 83% of women reported that they had received health education from HEWs on environmental sanitation (Negusse et al, 2007). Programme coordinators also claim that the HEP has increased community awareness on various aspects of health (Bekele et al, 2007). However, there are no national studies that substantiate the increment of health awareness attributing to the HEP. For instance, studies in Tigray region illustrate that the level of knowledge is low among the community. Out of 60 women interviewed, 48 (80%) reported that the HEWs taught them on prevention and control of common diseases. They named HIV/AIDS, malaria and TB as the most common ones. Twenty six (43%) of the respondents knew that HIV is transmitted by unprotected sex,

28 (47%) knew that malaria is transmitted by mosquito bites, and 31 (52%) mentioned that TB is transmitted through air (Negusse et al, 2007).

Paulander et al (2009) in his study states that 48.8% of the respondents said that mosquito bites are the cause of malaria. Nearly 16% of respondents believe that malaria is a non preventable disease. In addition, the scholars report that the knowledge of the respondents on appropriate methods of malaria prevention is insignificant; they point out that 82% and 46.2% of the respondents mentioned that environmental management and ITNs respectively are the preventive methods (Paulander et al, 2009). These studies cover few districts and, therefore, cannot represent the whole scenario in the country.

The HEWs also give health education in order to bring the desired health behaviours and practices. In SNNP region, in two districts where there was better latrine coverage, hand washing facilities were available near 6% of the latrines. The assessment team also observed that there was poor hand washing practices among the households (RiPPLE, 2008).

The exclusive breastfeeding practice improved in regions where there has been support from Essential Services for Health in Ethiopia (ESHE) project. The household-end survey of the project showed that the proportion of infants who exclusively breastfed up to six months has increased from 75% to 85% in Amhara, 45% to 79% in Oromiya, and 54% to 66% in SNNP regions. The project trained over 54,000 community health promoters (CHPs) who closely work with the HEWs in the project area (USAID/ESHE, 2008). The HEWs supervise and coordinate the activities of the CHPs.

- **Quality of Services**

HEP implementation includes the improvement of quality of treatments for the diseases that are treated at health post level. It also aims at strengthening the demand for quality care both at community and referral levels.

Quality assessment of services provided by HEWs has not yet been done. But, available evidence shows that the quality of existing services is not optimal. For instance, the pre-service training of the HEWs was not adequate to enable them to provide delivery and postnatal care (Teklehaimanot et al, 2007). Trainees recruited for HEW training are the ones who scored lower grade points in General Secondary Education Certificate Examination (Kitaw

et al, 2007). The HEWs do not always treat malaria cases based on Rapid Diagnostic Test (RDT) results. They often treat negative cases with ACTs (Chabot, 2008). Reasons for treating negative cases could be the case definition used for clinical malaria that assumes patients in malarious areas with fever to have clinical malaria (FMOH, 2004b). The HEWs also lack skill in identification and referral of patients with other febrile illnesses such as pneumonia, relapsing fever and meningitis. Consequently, service receivers even tend to think that HEWs are unhelpful and make no much difference (Negusse et al, 2007). Likewise, health posts often lack essential supplies such as anti-malarial drugs, ORS, and contraceptives (Teklehaimanot et al, 2007). Almost two thirds of the health posts are not well equipped (FMOH, 2009) that could lower the quality of services.

The HEWs are given a wide range of duties and responsibilities. They are overloaded with many tasks (Chabot, 2008). The working condition of the HEWs under pressure may affect the quality of services provided by them. It could also make HEWs lack focus on priority and high impact interventions. It is evident that the HEWs are not implementing all the 16 health packages. For example, there is no information about the performance and monitoring mechanisms for HEWs intervention in adolescent reproductive health services, food hygiene, safety of water supply and control of insects and rodents.

- **Equity**

It is evident that the HEP helped to improve rural community's access to essential preventive, promotive and basic curative care. Despite the efforts to improve equity between urban and rural, as well as between regions, there are still important differences among regions in terms of benefits gained by HEP.

Firstly, special programmes and projects seem to relatively favour better-off regions more than poorer regions. This undermines equity. For instance, training and support provided by Pathfinder and ESHE projects in SNNP, Oromiya and Amhara regions have improved capacity and performance of the HEWs and other community health workers (CHWs) found in these regions (Chabot, 2008).

Secondly, the overall performance of the HEP in pastoralist and newly emerging regions has been lagging behind other regions (FMOH, 2008).

Although the government has made some modifications for the pastoralist regions particularly by lowering the educational level to grade 6th and training duration to 6 months for HEWs due to lack of educated people in these regions (PPD FMOH, 2005), they still deserve special attention and support.

Thirdly, in the decentralised system of the country, Woredas/Districts have the responsibility to allocate budget and other resources for the HEP (see annex 3). Insufficient resource allocation at Woreda level is limiting the implementation of the key activities of the HEP (Chabot, 2008). This could lead to further performance disparity between Woredas with better resources and those with less resources.

4.2.3 Impact of the HEP

Effectiveness of the HEP will be described based on points illustrated in the conceptual framework and fig 3 under the health system goals/impact.

- **Maternal and child mortality**

There is no impact assessment done yet on the HEP contribution to reduction of maternal deaths.

Inadequacy of the pre-service training is not adequate to qualify HEWs to be 'skilled attendants'. The country has prepared a one-month on-service training package for HEWs on clean and safe delivery. The training is currently carried out in the health centres where there is no adequate number of labouring mothers. The training is not adding adequate skills for the HEWs (Chabot, 2008).

Focusing on the skill training that enables the HEWs to manage clean and safe delivery alone does not help to reduce maternal deaths. They need adequate skills on early detection of complications and timely referral of mothers with childbirth complications. Review of evidence shows that access to skilled attendant and emergency obstetric care (EmOC) are the priority interventions help to reduce maternal deaths in resource poor settings (Prata et al, 2009).

From this evidence, one could argue that the HEP interventions might not help in reducing maternal deaths at all.

Moreover, in Ethiopia, both access to skilled care and EmOC are limited due to various reasons:

- Poor infrastructure (such as: absence of roads) in rural areas, lack of transportation and finance are among the top barriers for women to reach the facilities during emergency (Hamelin, 2004);
- The referral system between all levels of health facilities is weak; and,
- The available health facilities lack skilled health personnel, essential drugs and supplies to provide emergency care (FMOH, 2007b).

A recent estimate made by UNICEF shows that the mortality rate of under five children in Ethiopia in 2007 was 119/1,000 LBs (UNICEF, 2008) showing a mere reduction of 4 deaths/1,000 LBs since DHS 2005. The child health interventions implemented by the HEWs do not include the treatment for pneumonia which is the main child killer among under-fives (Chabot, 2008).

The second ranking cause of deaths in children under five in the country is neonatal complications. Infections (32%) and birth asphyxia (29%) together are responsible for nearly two-thirds of the neonatal deaths (WHO, 2004). These two main causes of neonatal deaths can be prevented by providing skilled care during childbirth (Lawn et al, 2005) which the HEWs are lacking. Therefore, the impact of the HEP on child mortality could be limited unless the HEWs are enabled to manage both pneumonia and neonatal problems. This is because evidence shows that CHWs have improved child health outcomes through child health interventions including treatment of pneumonia (Haines et al, 2007).

- **Morbidity and Mortality due to other Common Diseases**

The health facility report shows that there has been significant decline in malaria cases and deaths from 2005 to 2008 due to distribution of over 20 million ITNs (FMOH, 2008a). Institution-based malaria case fatality has declined from 4.5% to 3.3% in children >5 years, and from 5% to 4.5% in age <5 years (Chabot, 2008). A study done by Otten et al also confirmed that the malaria cases and deaths have decreased in the country (see fig 9). In children <5, the mortality decreased by almost half over the one year following the distribution of LLITNs and introduction of the ACT (Otten et al, 2009). The contribution of the HEP to the results is through the HEW

involvement in ITNs distribution, follow up of its use and treatment of cases at community level.

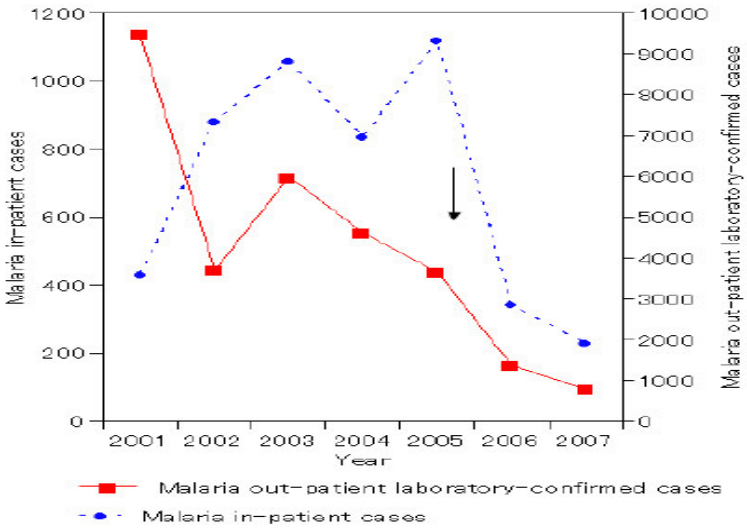

Fig 9 Reported malaria Cases in Children under five years old, January to October 2001–2007, Ethiopia

Source: Otten et al (2009)

The HEP can also bring impact on tuberculosis morbidity and deaths through active finding of suspected cases, defaulter tracing and follow up cases on treatment by HEWs. However, professional supports expected to be given to HEWs such as training and follow up are not sufficient and up to the minimum standard (Chabot, 2008).

- **Responsiveness of the HEP**

Responsiveness in health system performance is related with non-clinical aspects of people's expectations and how the health system is meeting these expectations (WHO, 2000). There is a lack of information on how far the HEP is meeting the rural people expectation. However, some available evidences indicate that there are areas of the HEP that could lower its responsiveness.

An assessment on the working conditions of the HEWs in 2006 reveals that 37% of the HEWs were found living in one of the health post's rooms (Teklehaimanot et al, 2007). The midterm review team also observed that in one health post the HEW and her sister lived in two rooms of the health post with three rooms providing service using the third room (Chabot, 2008). The

occupancy of health post rooms by the HEWs may compromise privacy of clients.

Among 50 health posts inspected by the study team, 25% had no water source or use unprotected water sources, and 10% had no latrine (Teklehaimanot et al, 2007). Many rural health posts that were constructed by the community are poor and lack quality, too (Chabot, 2008).

People who visit health posts for emergency conditions are expected to be referred to the nearest health centres promptly. However, due to various reasons such as lack of skill, a poor referral system and lack of transportation described earlier, there could be delayed responses from the HEWs.

Other problems are associated with long absence of the HEWs for maternity leave, training and other personal reasons that could prevent people from getting services at health posts when they need. It is also difficult for the people to see the HEWs for consultation as they rarely post their schedules at the health posts (Teklehaimanot et al, 2007).

Although there is no evidence, the HEWs may not freely talk with men on culturally sensitive issues like sexually transmitted infections, condoms and sexual and reproductive health that could constrain their interpersonal communication.

- **Financial Risk Protection**

One of the fundamental objectives of the health systems is to protect households from catastrophic health costs (WHO, 2000). Services covered by the HEP including immunization, FP, ANC, delivery and postnatal cares and malaria diagnosis and treatment are provided free of charge (FMOH, 2005b).

There is no recent information showing that these services are actually provided free of charge at the health post level. A welfare monitoring survey conducted in 2004 showed that 9.5% of the rural people in surveyed areas reported that the cost of services in the health post is too expensive (FDRE CSA, 2004). The report about the expensive cost at health posts could be due to informal payments or opportunity costs for clients.

Most of the exempted services in Ethiopia are financed by donors. This could affect the sustainability and quality of the services. Furthermore, the implementation of exemption, fee waiver and community health insurance mechanisms are not functioning well (Chabot, 2008).This could lead to catastrophic health expenditures for the poor people who are referred to health centres or hospitals.

4.3 Efficiency of the HEP

Obtaining desired health results particularly in developing countries where the resource is scarce is challenging. It requires a careful selection of high impact interventions and an efficient use of resources (Baltussen and Niessen, 2006).

- **Outputs of the HEP: HEP value for money?**

The HEP outputs are already described in detail under the effectiveness. The main achievements of the HEP are: increased coverage of latrine from 35% to 51%, fully immunised children from 44% to 63%, contraceptive use from 25% to 51% and ITNs from 2% to 70% in 2005 and 2008 respectively.

In 1993, the World Bank has made a cost estimation for a whole package of basic services for low-income African countries which was USD 13.22. The cost of services at primary level including health centres was about USD 4.6 (World Bank, 1994). Later, the commission on macroeconomic and health has upgraded the minimum cost to scale up essential interventions in developing countries to USD 30-40 in 2001 (WHO, 2001). Therefore, the past cost of USD 4.6 would be upgraded currently to approximately USD 12-15. The current investment in the HEP (not include costs of health centres) is about USD 5.5 per person which is even much lower than the cost estimated 15 years back. Moreover, the total health expenditure (THE) per capita of the country was USD 26 PPP in 2006 (WHO, 2009) showing that around 21% of current government spending is on community-based PHC programme. Given the country's low THE/capita, one can see that the government is allocating considerable amount of money for PHC at community level.

The midterm review team who reviewed the HSDP III pointed out that the country's health sector is getting 'value for its money' given the current low funding of the sector (Chabot, 2008). However, there are certain problems in regard with the efficient use of available resources. For example, due to

the poor quality of pre-service training, large numbers of HEWs require refreshment training. The HEP approach may thus be technically inefficient. In addition, because of the complex health post kit procurement and distribution, many health posts are not providing service with their full capacity even though they are staffed with HEWs (Chabot, 2008). In well equipped health posts, the HEWs have not been utilising some resources such as delivery kits and tables (Teklehaimanot et al, 2007).

In general, with the little money invested and the short period of the HEP since it has started, the outputs achieved are quite good and promising. Nevertheless, if more money is available for construction of health posts, housing, supervision and supplies and the available resources are used efficiently, probably the programme can do more than what it currently achieved.

4.4 Sustainability of the HEP

The EU evaluation framework defines sustainability as 'the extent to which positive effects are likely to last after an intervention has terminated' (EC, 2005). Sustainability of the health programmes however, has been judged from different perspectives. For instance, Pluya et al (2004) describes a sustained programme as the one that incorporated in to the organisation's routine activities or procedures (Pluya et al, 2004). African Programme for Onchocerciasis Control (APOC) takes sustainability of Community –directed Treatment with Ivermectine (CDTI) programme as when it continues functioning in the future, achieves high coverage, integrates into the country's healthcare system, wins strong community ownership and uses local resources (WHO, 2009c).

Many developing countries have been providing essential services to the community by Community Health Workers because of the lack of health workers. These CHWs show a high attrition rate (WHO, 2007). Regarding the HEP, this may not be the concern because the HEWs are full time employees paid by the government. Moreover, the selection of HEWs from their respective community and their ability to communicate with the community language has enhanced community trust and support to the HEP (Bekele et al, 2007; HEEC, 2008)

Strong leadership and political commitment are vital for programme sustainability. Strong leaders in resource poor settings who mobilise

resources, prioritise them for health development and fairly distribute the resources have improved the health of their populations (Gruen et al, 2008). The country's government is providing substantial financial and policy support for the HEP. The top leaders of the MOH have also shown strong commitment and leadership which is important for sustainability of the HEP (Chabot, 2008). However, the following problems could constrain the HEP's future sustainability.

The assignment of HEWs outside their Kebeles of original recruitment is a plausible reason for the poor performance and absenteeism (HEEC, 2008). The HEW's future ambition and plan to serve as a HEW in their Kebele is another challenge for the HEP. Very few HEWs want to stay and work for >2 years in the Kebele of their current placement. Only 16% want to stay for >3 years and 70% would expect upgrade training in Nursing (Teklehaimanot et al, 2007). Assessment in 2008 in two regions (Amhara and SNNN) shows that 81% of the HEWs want to leave the health post after 2 years (HEEC, 2008)

The government promised to give a one year upgrade training for the HEWs after they serve for three years. By now, almost half (12,700) HEWs have already the required services of three years and are eligible for the training. If this group of the HEWs will join the training, it would severely affect the performance of the health posts. The cost of training for the new HEWs and salary for those who upgrade requires large investment which undoubtedly affects the sustainability of the HEP (Chabot, 2008).

Sustainability of the HEP also depends on the motivation of the HEWs. These young women who work in remote and rural areas of the country need highly supportive environment. However, lack of transportation, inadequate resources, lack of housing, insufficient supervision and misplacement in working areas have been lowering the motivation of the HEWs. The HEWs also poorly focus on important interventions because they are expected to carry out a variety of activities included in 16 health packages. They are also engaged in Kebele administrative work as member of the Kebele cabinet. In short, they become 'jack of all trades' (Chabot, 2008). These burdens of activities and responsibilities may lead to HEW's job dissatisfaction.

Another constraint to HEPs sustainability is low community participation. Despite its involvement in construction and selection of HEWs to some extent, the community's active involvement in planning, monitoring and

evaluation of the HEP is very limited (Teklehaimanot et al, 2007). It is the responsibility of Woredas to enhance local participation in the health and other development programmes. But, they lack capacity to plan, mobilise and involve community in the programme.

One of the key intervention areas of the HEWs is training of model families. The performance assessment of the HEP has been focusing on the number of trained model families (FMOH, 2008a). However, questions may arise to the maintenance of health behaviours and practices by the trained model families. Because, there is always a possibility of returning back to the pre-training condition if no support and follow-up is done.

Donors support the major activities of the HEP-training of HEWs and equipment and supplies for the health posts (Chabot, 2008). This will affect the sustainability of the HEP unless local resources are secured for these activities in the future.

4.5 Contextual Factors Influencing the Performance of the HEP

The HEP performance has been influenced by different contextual factors such as socio-economic conditions, socio-cultural situations, government commitment, and decentralisation. Let's see each of them in some details.

4.5.1 Socio-economic Conditions

The country's literacy rate among girls aged 15-24 years accounts only to 39% (UNICEF, 2004). The effect of this low rate of girls' illiteracy on the programme is particularly observed in making selection of qualified rural girls difficult (Kitaw et al, 2007). In addition, lack of education and domestic workload were found preventing women from participation in preventive activities such as community conversation on HIV (Cummings et al, 2006).

As stated earlier, Ethiopia is among the poorest nations in the world. Consequently, like many other sectors in the country, the health sector faces severe resource constraints, and, therefore, depends on external aid. Because of delayed disbursement prediction problems associated with aid, the sector confronts problems of the implementation of its plan (Alemu, 2009). The midterm review report also shows that there is a decrease in budget planned for activities of the HEP and upgrading of health centres. In comparison with the planned, the allocated budget is decreased by 11% and expenditure by 34% due to resource constraints (Chabot, 2008).

4.5.2 Socio-cultural Situations

There are socio-cultural factors that affect access to and utilisation of services provided by the HEP. For instance, mobile lifestyle of the pastoralist communities in some regions or zones (e.g. Somali, Afar regions, and pastoralist zones in Oromiya and SNNP) has limited the construction of health post and service provision (Chabot, 2008). Moreover, women tend not go to health posts for delivery/giving birth due to cultural beliefs and practices. A community-based survey on safe motherhood indicates that women prefer giving birth at home because they need care that is consistent with community's beliefs and traditions. Traditional Birth Attendants (TBAs) and relatives usually provide services which have acceptance in the culture (FHD FMOH, 2006)

4.5.3 Government Commitment

Good leadership role of the top-level health managers and strong support from the Prime Minister are among the reasons for the encouraging results of the HEP (WHO, 2008a). The major contribution of the government is the construction of the health posts and payment of salary for the HEWs (Chabot, 2008). Sustainability of the programme is more likely when there is a strong leadership and support from the government.

4.5.4 Decentralisation

Although decentralisation has improved the delivery of basic health services in some regions of the country (e.g. SNNP and Oromiya), many Woredas encounter critical shortage of skilled manpower, budget, and other resources required to plan and implement the services (World Bank, 2008b). For example, due to the shortage of these resources, most woredas have not been able to construct health posts, provide supportive supervision and logistics for the HEWs (Chabot, 2008).

As pointed out by Bekele et al (2008), in some woredas, the HEWs are transferred to health centres and Woreda health Offices that could negatively affect the implementation of the HEP (Bekele et al, 2008).

In the next chapter, experience of Ghana on Community-based Health Planning and Services (CHPS) is assessed and the findings discussed comparing with the HEP.

CHAPTER 5: LESSONS FROM OTHER COUNTRIES

5.1 Ghana Community-based Health Planning and Services (CHPS)

Following the evidences of Navrongo research and pilot results of the Nkwanta district, Ghana adopted a national health programme called 'Community-based Health Planning and Services' (CHPS) in 1999. The programme aims to improve rural people's access to health services. Community health officers (CHOs) provide a package of essential primary health care services. They provide services that include immunisation, family planning, maternal health services (antenatal, delivery and postnatal cares), treatment of minor illnesses and health education. CHOs live in the community and provide the services going door to door. One CHO covers 3,000-5,000 population in her catchment area (Nyonator et al, 2005).

The CHPS programme has been implemented through the following six sequential milestones:

1. ***Preliminary Planning***: The community is grouped into service delivery zones where a CHO will be assigned. The planning is done at the DHMT level.
2. ***Community Entry***: During planning, the community is made aware about the programme and relationship is established with the community. The DHMT, community members and opinion leaders discuss on CHPS plan and activities. Village health committees (VHCs) are also established to facilitate programme support.
3. ***Construction of Community health Compounds (CHCs)***: The community constructs simple health facilities-CHCs that contain living room for CHOs and room for provision of services. Community leaders play vital role in planning and mobilising resources for the construction of CHCs.
4. ***Procurement of essential equipment***: The CHCs are equipped with essential medical equipment and logistics including bicycles or motor bicycles.
5. ***Posting CHOs***: Community health nurses (CHNs) trained for one year are deployed into the CHPS zones as CHOs through community 'durbars' (traditional gatherings of residents). The CHNs are provided refresher training and orientation before their assignment.

6. ***Deployment of Volunteers***: The VHCs recruit volunteers in their villages. The volunteers are given some training on community mobilisation and promotion of family planning. They assist the CHOs to carry out their duties (PPME GHS, 2002a).

5.1.1 Relevance of the CHPS

Seventy percent of the Ghanaian live in communities located at >5 km from the nearest health care facilities. The Child mortality in these communities is 40% higher than those living within 5 km. The infant mortality in rural areas is also 60% higher compared to urban areas. Moreover, insufficient resources to expand community-based health care and high staff turnover in rural areas has contributed to the health problems of the rural Ghana (PPME GHS, 2002b).

The CHPS programme was initiated by the GHS to eliminate geographical barriers and bring quality PHC services close to the community (GHS, 2002b). The objectives of the CHPS are to improve equity in accessing health care, improve efficiency and responsiveness of health services and develop effective Intersectoral collaboration. To achieve these objectives, the GHS has developed the basic package of services that include health promotion and disease prevention, management of common and minor illnesses and case detection and referrals (GHS, 2005). Therefore, CHPS is the key strategy to address the health problems and community needs in Ghana.

Maternal mortality is high in Ghana (GHS, 2005). Conversely, there are few midwife-CHOs working at the community level. In Ghana, non-midwife CHOs are not trained in midwifery and are therefore not allowed to conduct deliveries except the 'emergency delivery'. As a result, the CHOs are not able to provide the services needed by the community (SPH Ghana, 2009).

5.1.2 Effectiveness of the CHPS

No information was found about the national coverage of CHPS services. However, USAID is sponsoring the programme in 30 districts and midterm survey done in these districts shows the following results.

- **CHPS Implementation**

Midterm survey report by CHPS Technical Assistance shows that 28.1% of the populations in 30 project districts were covered by CHPS. A total of 578

CHPS zones were identified and 593 VHCs established in these zones. CHPS zones with functioning CHCs increased from 94 to 150 and number of CHOs from 94 to 195 in 2004 and 2006 respectively. The availability of essential equipment and supplies also improved during the project period. Zones that had more than 20 items increased from 10 in 2004 to 79 in 2006. The report also shows that volunteers are available in 97.7% of CHPS zones (USAID, 2008)

- **Service Coverage**

The number of pregnant women registered for ANC services increased from 7,675 in 2004 to 12,772 in 2006. The proportion of pregnant women who received two doses of tetanus immunisation increased from 63% to 85%. The number of deliveries assisted by CHO midwives increased from 789 to 2,661 and family planning visits from 20,632 to 32,199 in 2004 and 2006 respectively. The number of diarrhoeal cases managed by CHO also increased from 1,411 to 2,770 and children <5 years of age with malaria from 6,236 to 17,875 in 2004 and 2006 respectively. In addition, the number of ITNs distributed or sold at CHPS zones is doubled which was 2,159 in 2004 and 5,571 in 2006 (USAID, 2008).

The recent CHPS review by Ghana SPH shows that the performance assessment of the CHPS has been limited to the number of CHCs constructed annually. Although the number of functional CHCs have increased from 19 in 2001 to 401 in 2008, it is only about 31% of the planned for 2008. The overall implementation of the programme at national level is below the average. The review report also shows that there were 1,500 CHNs trained in 2008 but, there is a problem of deploying them to the CHCs (SPH Ghana, 2009).

5.1.3 Efficiency of the CHPS

The government, community, NGOs, donor agencies, civil society organisations (CSOs) and the High Indebted Poor Country (HIPC) funds are the main sources of finance for the CHPS. The DHMTs give priority to clinical services compared to preventive and promotive activities (NHIS) (SPH Ghana, 2009).

There are some evidences that show inefficient use of available resources in Ghana. For example, there has been an increment in the number of CHNs

but only 25% are deployed as CHOs (USAID, 2008). Unavailable CHCs and lack of basic supplies and equipment also limit the service provision by the CHOs (SPH Ghana, 2008).

5.1.4 Sustainability of the CHPS

Similar to Ethiopia's HEP, the Ghana CHPS programme is integrated into the country's health service. The CHOs are paid by the government; this ensures financial sustainability. In addition, community participation in constructing CHCs, accepting the CHOs and supporting CHPS through volunteer participation would strengthen the socio-cultural sustainability of the programme.

Although there has been improvement in performance of CHPS in USAID supported districts, it is very low in other districts of the country. The current improvement in CHPS-TA districts may not be sustained when the project will phase-out. Weak political support and willingness to scale up the programme (SPH Ghana, 2009) will also be a threat for the sustainability of CHPS in Ghana.

- **Best Practices**

- Ghana health service has a policy of allocating at least 42% of its resources to the Districts since 1997 (WHO, 2008b). Districts have been allocating budget for the construction of CHCs. Ninety six percent of the District Health Management Team (DHMT) in CHPS-TA project areas reported that they received some support from District assembles for CHPS after strong advocacy and sensitisation.

- The CHOs have been getting supervisory visits from DHMT and sub-district health management team (SDHMT). 43% of the CHOs received supervisory visits from DHMT and 27.5% from SDHMT.

- Immunisation, ITN use and family planning coverage have improved in CHPS-TA supported districts.

- CHPS is an evidence-based programme that has been scaled up at national level (USAID, 2008).

- CHPS progress monitoring and evaluation is done at all levels. Every district has a focal person for CHPS. The focal person quarterly reports to the regional CHPS coordinator and the regional one to the national CHPS M&E secretariat (GHS, 2005).

- The Ghana CHPS deploys midwives as CHOs who would improve rural women's access to skilled maternal care.

- The availability of residence with necessary comfort logistics and transportation and communication logistic (motorbike and two-way radio) in CHCs would help CHOs to carry out their activities.

- **Weaknesses**

- Inadequate resource and budget support from the partners such as MOH and district assembly.

- Lack of knowledge about CHPS among leadership at various levels of the health sector for more attention is given for curative services.

- Inadequate number of CHOs with midwifery background and community mobilisation skill.

- Lack of community participation in programme planning (SPH Ghana, 2009).

- Weak Intersectoral collaboration due to absence of policies and guidelines on collaboration between health sector and other agencies (WHO,2008)

5.2 Discussion

Interventions of both the HEP and CHPS are addressing the major health problems in Ethiopia and Ghana (HEEP FMOH, 2007; GHS, 2005). The programmes target the rural population and aim to make quality health services accessible to these rural people. Nevertheless, inadequate supplies at community-based health facilities and provider's (HEWs and CHOs) lack of skill in delivery is limiting their provision of maternal health services (Teklehaimanot et al, 2007; SPH Ghana, 2009). The problem is more evident among the HEWs, because some of the CHOs (19.5%) in Ghana are midwives (USAID, 2008).

More than a quarter of deaths in children <5 years in Ethiopia occur due to pneumonia. Evidences prove that CHWs adequately trained and supported can treat pneumonia effectively with antibiotics and thus reduce deaths in under-five children (WHO/UNICEF, 2004). However, the HEWs are not providing treatment for pneumonia cases because of absence of policy on use of antibiotics in the community. In Ghana, the CHPS policy allows CHOs to treat simple cases of acute respiratory infections (ARI) including pneumonia (GHS, 2005).

The HEWs and CHOs need good supportive environment and incentives to work in rural areas for the desired period of time. In Ghana, the CHPS policy grants comfort logistics such as accommodation with durables (bed, furniture, TV, radio, kitchen ware) and transportation means (motorcycle) for the CHOs (GHS, 2005). The HEWs in Ethiopia are lacking such incentives. They have limited access to information (Ye-Ebiyo et al, 2007), inadequate on-job training and weak supportive supervision (Chabot, 2008). In Ghana, although there has been improvement in project districts, there are still less supervisory visits particularly from SDHMT to CHOs (USAID, 2008).

Updating and enhancing the knowledge and skill of these health care providers in rural areas is crucial because they may lose their knowledge and competencies over time. If they are no longer practicing their profession in a correct way, they may negatively affect the health of the community. As Navrongo experiment in rural Ghana showed, training of health volunteers who provide health education, treat malaria and dispense anti-pain, antacid and multivitamins and community involvement in health planning were resulted in 11% increase in child mortality. The mortality also increased

even in areas with both volunteers and community nurses (Pence et al, 2005).

In both countries, the health services have been decentralised to district and sub-district level. Adequate capacity and leadership at these levels is very crucial in planning, implementing, monitoring and evaluating such large programmes. However, inadequate resource allocation and lack of understanding about the programmes at district level is seen in both HEP and CHPS (Chabot, 2008); SPH Ghana, 2009). Besides, the pace at which the CHPS has been scaled at national level seems slower compared to the HEP. Over the past 6 years, the HEP has achieved 82% of the HEWs training and health post construction that covers 73% of the population (Chabot, 2008). In contrast, the CHPS has covered only 6.4% of the population in Ghana until 2007 which could be due to weak political commitment and support to scale up the programme (SPH Ghana, 2009).

For scaling up the programmes, both countries have been focusing on expansion of physical health facilities. However, adequate skill training of human resources (HEWs and CHNs) and basic supplies for the facilities– essential for the functionality of the facilities – have been overlooked (Chabot, 2008); SPH Ghana, 2009).

5.3 Lessons Learned

- Adequate skill training and supportive working and living environment are key factors for effective functioning of the community-based health workers.

- Planning, implementing, and monitoring capacity at district level is critical for scaling up national public health programmes.

- Strong political support and top-level leadership determine success of the programmes.

- Active community participation and ownership are vital for sustainability of the community-based programmes.

In the next chapter, conclusions are drawn and recommendations made.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The following conclusions have been drawn from the findings and analysis

- The HEP is a relevant programme comparing its objectives and interventions that aim to address the major health problems of the country. However, it couldn't address the main causes of illness and death in women and children. This is mainly because the HEWs lack skills in delivery, newborn care and treatment of pneumonia. Moreover, the role of HEWs in HIV and tuberculosis prevention and control is not prominent.

- Great attention has been given for construction of health posts and training of the HEWs. Yet, a large proportion of the health posts do not function due to lack of equipment and supplies. Functionality of the health posts is further limited by poor supportive and working environment for the HEWs. Among the identified problems, lack of housing, insufficient supportive supervision and weak transportation and communication system are the main ones.

- The efficiency of the programme is not bad. The outputs achieved so far are encouraging in comparison with the little money invested. However, there is still room for improving efficiency through appropriate use of available resource and strengthening community participation and supportive supervision.

- The HEP is likely to be sustainable due to three main reasons: its integration into the existing health care system, selection of HEWs from their own community, and strong government support. However, poor management capacity at Woreda level, HEW's low motivation, weak community participation and dependency of the HEP on donors particularly for supplies may threaten its sustainability in the future.

- The health posts are not well linked with the health centres. They are isolated facilities that are not connected with the primary health care system. This is because the referral system is very weak and the means of communication such as transportation and telephone/radio

communication between health posts and health centres is not well developed.

6.2 Recommendations

1. The HEW's Pre-service training has to be strengthened. More emphasis should be given to improve the quality. First, candidates with relatively better capacity should be selected. Second, adequate resources such as tutors, training materials and time for practical training should be allocated. Third, quality of the training should be monitored and measures should be taken at the early stage.

   To enable the HEWs to treat pneumonia with antibiotics, the Essential Health Service Package needs revision, and should include the use of antibiotics at the health posts for treatment of pneumonia. Then guidelines on identification and treatment of pneumonia by the HEWs should be developed.

   Training need assessment should be done to provide on-job training. Priority should be given to skill training that will have an impact on maternal and child health. The training should involve identification of childbirth complications and early referral, newborn care and treatment of pneumonia at health posts. The training need to be organised in health centres and hospitals where there is adequate number of cases.

2. Health posts that have not been equipped should be identified and equipped urgently. It may take longer time until the procured equipments and supplies reach the posts. Therefore, the MOH, Regional Health Bureaus, Woredas and other partners have to find unutilised supplies and provide the health posts.

   Resource allocation and priority setting for the HEP at the Woreda level should be assessed and gaps should be identified. Woredas with inadequate resource should be supported and those with relatively adequate should be informed to ensure that they allocate adequate budget and resource for the health post construction, housing and supervision.

3. To improve the efficiency of the HEP, the following three main measures are recommended. First, capacity for logistics management needs to be improved to efficiently use the available resources. There should be appropriate planning and timely procurement of equipments and supplies. Resources required for the next year should be identified and planned ahead.

   Second, to achieve the high output with the same programme cost, the community participation in planning, implementing, monitoring and evaluating the HEP should be maximised. Strategies to improve effective community participation should also be developed, and the community should be allowed to identify its health problems and methods of solving them. This can be facilitated through involving community-based organisations and associations. Based on this, plan of action should be prepared in collaboration with the community including its roles and responsibilities. The community should also get involved in monitoring and evaluating the activities of, for example, the Kebele council and other civic associations on regular bases. Experience sharing from Kebeles that managed good community participation will also help to improve it in the other Kebeles.

   Third, the absence of culture of supervision and support to the peripheral health facilities should be changed to make the programme more efficient. From the experience and observation, it is not the lack of money that constrains supervision and support. Rather, the culture of supervision is not considered as an important activity, and, therefore, budget is not allocated for it.

4. The following efforts should be made to further strengthen the sustainability of the HEP.

   Strengthen the capacity of Woredas: Adequate numbers of qualified supervisors and programme coordinators should be assigned. Their capacity has to be strengthened through up-to-date training, sufficient budget and logistical support.

   Plan and implement different incentive mechanisms to increase retention of the HEWs: This could involve provision of non-monetary incentives such as recognition for their work, provision of motorbikes

or bicycles in accessible areas, and adequate working equipments and supplies. In addition, opportunities for on-job training and future career development should be carefully planned and implemented. Rural allowance should also be considered based on incentive packages as it is the case for some health workers. The HEWs rural allowance can vary according to the remoteness of their Kebeles, and the climate conditions. The excess workload on the HEWs should be minimised by involving more volunteers in health education and promotion activities. Priority interventions should also be identified and communicated to the HEWs so that they will focus on them.

Maximise community participation as mentioned above.

To address the problem of donor dependency, attention should be given to the mobilisation and efficient use of local resources.

5. To strengthen the referral system and technical support between health posts and health centres, the following actions should be taken.

   First, community awareness needs to be raised on types of services provided at health post and health centres and how to get the services. Then self-referral for care that is provided at health post should be discouraged by the health centres.

   Standard referral guidelines and formats should be developed and awareness training given to both HEWs and staff at health centres. The referral system should be monitored regularly and feedback given to the concerned bodies.

   Means of transportation and communications should be made available and accessible to facilitate referral of patients. Ambulances that transport patients from the health posts should be placed at health centres. The health posts should be also equipped with telephones/radios for emergency calls and communications with health centres.

6. More research is required on impact of the HEP, barriers to HEWs interpersonal communication and HEP-related priority setting and resource allocation at district level in order to identify the gaps and improve performance of the programme.

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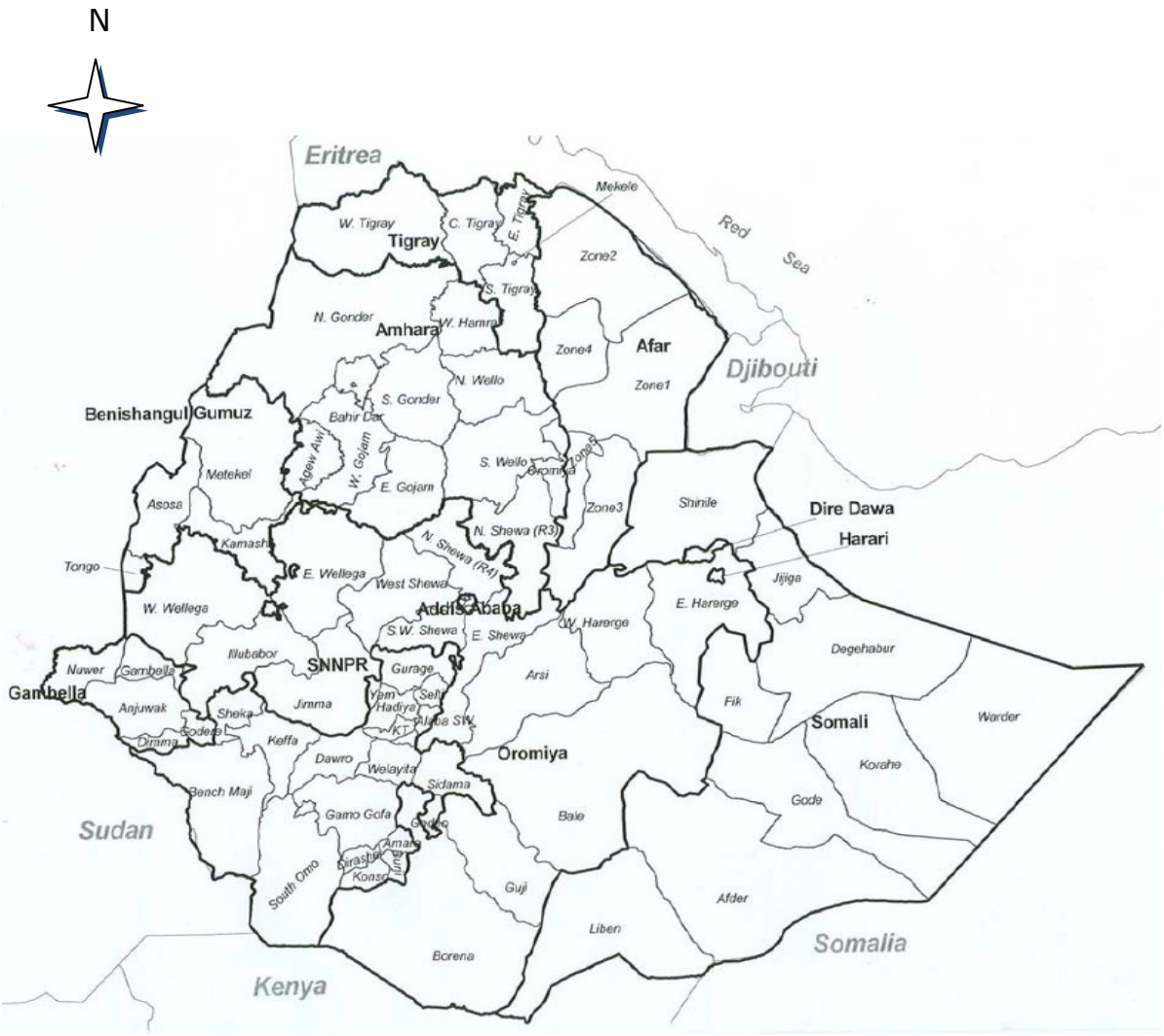
Annexes

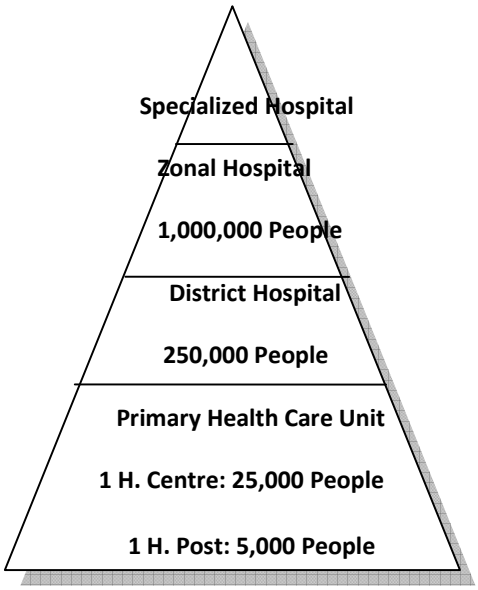
Annex 1 Administrative Map of Ethiopia: Regions and Zones, 2007



Source: HSDP III 2005/06 – 2010/11 (GC) Midterm Review report (2008)

Annex 2 Health System Organisation, Ethiopia

The 'primary health care unit' (PHCU) is one of the service delivery units in the four-tier health care system of Ethiopia. The PHCU includes one health centre (intended to serve 25,000 people) and five satellite health posts (each intended to serve 5,000 people). These essential units of HEP form the bottom level component of the country's health care system skeleton (cf. fig 1). Each health post serves as an operational centre for two HEWs who are mainly responsible for providing outreach activities from house to house. HEWs are accountable to both district health office and Kebele administration.



Four-tier health care system of Ethiopia

Former Six-tier health care system

The type of services provided by each health facility is known as the 'essential health service package' (EHSP). Health posts provide preventive and promotive health care. They promote healthy living and environmental sanitation, prevent major public health diseases and epidemics and mobilize community for health actions. Health centres serve as a first level referral for health posts and provide curative care for a variety of common diseases. They also provide emergency surgery in selected areas. On the other hand, hospitals provide secondary and tertiary referral care including surgery and specialist care. Specialized hospitals provide training of medical students and other health professionals.

Source: FMOH HSDP III, (2005); MOH & WHO (2003)

Annex 3 Essential Health Services Package Provided at Community Level, Ethiopia

Category of Services	Interventions and activities related to the category of services (and examples)
Family Health Services	▪ Basic ANC, including treatment of anaemia, malaria, and hook worm in pregnancy ▪ Immunization of mothers and children ▪ Clean & safe home and institutional delivery ▪ PNC with counselling on ENA, FP and treatment of anaemia ▪ Promotion of ENA, growth monitoring, Vit. A and iron complementation, and demonstration ▪ FP information and services (condom, oral and injectable contraceptives) ▪ ARH services (counselling on sexuality, HIV/AIDS and HTP, provision of condom) ▪ Assesses and classifies common child hood illnesses using the IMCI guideline and provides treatment of malaria, diarrhoea, and promotes appropriate feeding practices.
Communicable Disease Control Services	▪ Surveillance and epidemic control activities ▪ Malaria prevention and control (drainage of breeding sites, indoor residual spraying, case detection and management, ITN distribution) ▪ TB & leprosy continuation Rx, defaulter tracing, follow up for reactions & complications ▪ HIV/AIDS and STI related support and guidance on home based care, information and encouragement on VCT, promotion of ABC ▪ Prevention and control of rabies in collaboration with agriculture sector
Hygiene and Environmental Sanitation	• School health services, sanitation and screening • Water source protection, purification, management & prevention of contamination • Promotion of healthy housing ▪ Promotion of sanitation including sanitation campaigns, solid waste, disposal, & drainage ▪ Promotion of personal and food hygiene
Basic Curative Care & Rx of Major Chronic Conditions	▪ Treatment of diarrhoea, malaria, and intestinal parasites ▪ Treatment of eye and skin infections with ointments ▪ Treatment of emergency conditions (diarrhoea with ORS, fractures with splint, & anti pain for cases of severe pain) ▪ School health service (education, screening for major chronic diseases and ailments)
Health education and Communication	▪ IEC on major health problems at home, community meetings and at schools coupled with provision of related services, skills development & demonstration on practices ▪ Community mobilization sensitization and organization targeting key practices required to prevent and control major health problems ▪ IEC on balanced diet, HTP, breastfeeding, FP, care and activities during pregnancy ▪ Public education on common emergency conditions, & chronic diseases ▪ IEC & demonstration of small do-able environmental health actions

Source: FMOH, Essential Health Services Package (2005)

Annex 4 Indicators of the HEP, Ethiopia

Ser No.	Verifiable Indicators	Means of Verification	Responsible Body
1	No. of kebeles with functioning health extension workers.	Routine reports assessment	WHOs. RHBs
2	No. of kebeles with functioning health extension committees.	Routine reports assessment	WHOs. RHBs. FMOH
3	Increased level of health awareness of population particularly on the availability of health extension services.	KAP. periodic assessment	WHOs. RHBs. FMOH
4	% of < 1 children immunized for DPT_3 and against Measles.	Routine reports. EPI assessment	WHOs. RHBs
5	% of women of child bearing age using contraceptives.	Routine reports	WHOs. RHBs
6	No. of supportive supervisory visits by health centers.	Routine reports	WHOs. RHBs
7	No. of households with access to excreta disposal.	Routine reports. visits	WHOs. RHBs
8	No. of households with access to refuse disposal facilities.	Routine reports. visits	WHOs. RHBs
9	No. of persons assisted with first aid.	Routine reports. visits	WHOs. RHBs
10	No. of persons referred to health facilities for further care.	Routine reports	WHOs. RHBs
11	No. of suspected epidemics reported to the nearest health facility during the month.	Routine reports	WHOs. RHBs
12	No. of new TB patients referred to HES for follow up during the month.	Routine reports	WHOs. RHBs
13	No. of new leprosy patients referred to HES for follow up during the month.	Routine reports	WHOs. RHBs
14	No. of fever cases treated or referred during the month.	Routine reports	WHOs. RHBs
15	No. of children < 5 years weighed during the month.	Routine reports	WHOs. RHBs
16	Availability of ORS at the health extension service.	Routine reports. visits	WHOs. RHBs
17	No. of children treated with ORS during the month.	Routine reports	WHOs. RHBs
18	No. of mothers trained on ORS home based treatment.	Routine reports. interview	WHOs. RHBs

WHOs: Woreda Health Offices; RHBs: Regional Health Bureaus; HES: Health Extension Services;

Source: Federal MOH HSDP II 2003-2005 (EFY 1995-1997)

Annex 5 Duties and Responsibilities of different levels of the government in HEP, Ethiopia

1. **Federal Ministry of Health**

- Develop guidelines and standards
- Develop career structure and continuing education for the HEWs
- Mobilise resources and strengthen collaboration with different stakeholders
- Design and produce Information Education and Communication (IEC) materials
- Procure and distribute medical equipment and supplies
- Strengthen Health Management and Information System (HMIS) through the development of standard data collection, reporting and monitoring formats

2. **Regional Health Bureau/Zone Health Department**

- Provide technical and administrative support to Woreda Health Offices
- Implement the HEP guidelines based on local conditions
- Produce IEC materials in local languages and distribute them to the Woredas
- Receive report from Woreda Health Office and provide regional report to the MOH
- Mobilise and secure regional resources for the HEP
- Set up strong referral system between health posts and health centres
- Strengthen HMIS

3. **Woreda Administration**

- Mobilise resources and allocate budget for the HEP
- Coordinate the activities of governmental and non-governmental organisations
- Carry out monitoring and evaluation of the HEP

Annex 5 Cont.

4. Woreda Health Office

- Provide technical, financial and administrative support for the programme
- Allocate appropriate budget, staff, logistics and supplies for health posts
- Employ and assign HEWs to appropriate Kebeles
- Adapt IEC materials into local situation
- Provide supportive supervision to HEWs
- Plan and provide in-service training to HEWs
- Receive reports from health posts and provide performance report of the Woreda to Regional Health Bureau/Zone Health Department

5. Kebele/Village Administration

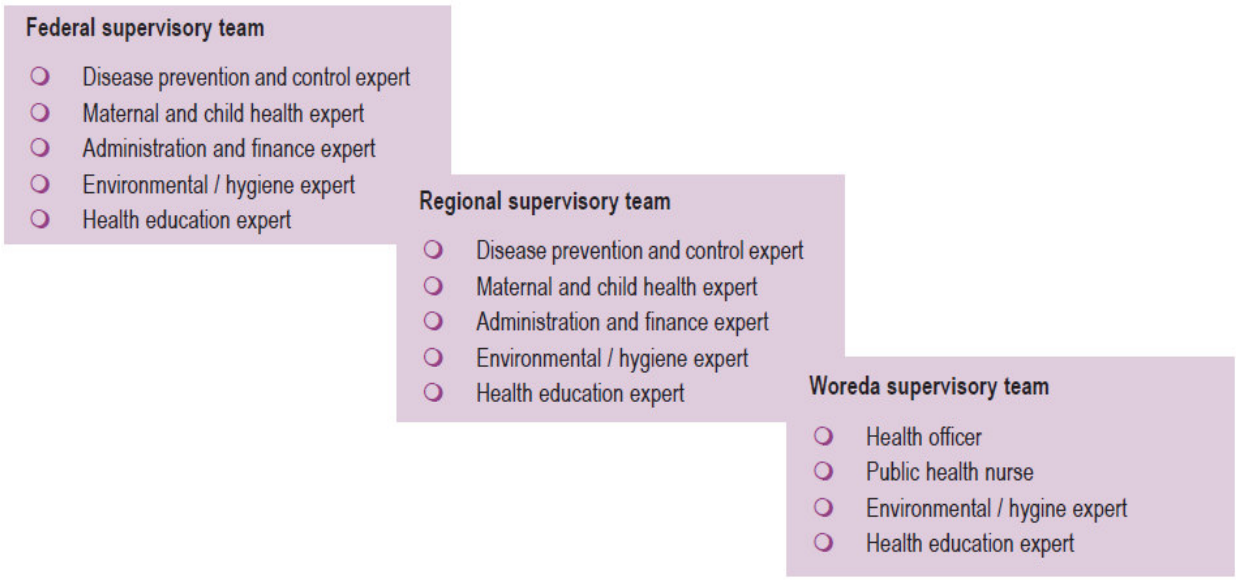
- Coordinate the HEP in their Kebeles
- Monitor and evaluate the programme
- Mobilise and use local resources
- Involve community in planning, implementation, monitoring and evaluation of the HEP
- Ensure availability of drugs and supplies in the health post

6. Health Extension Workers

- Manage the health posts
- Promote preventive actions through home visits and outreach services
- Refer cases to the health centres and provide follow-up care for those referred by the health centre
- Provide training for VCHWs and collaborate with them
- Offer performance report to Woreda Health Office

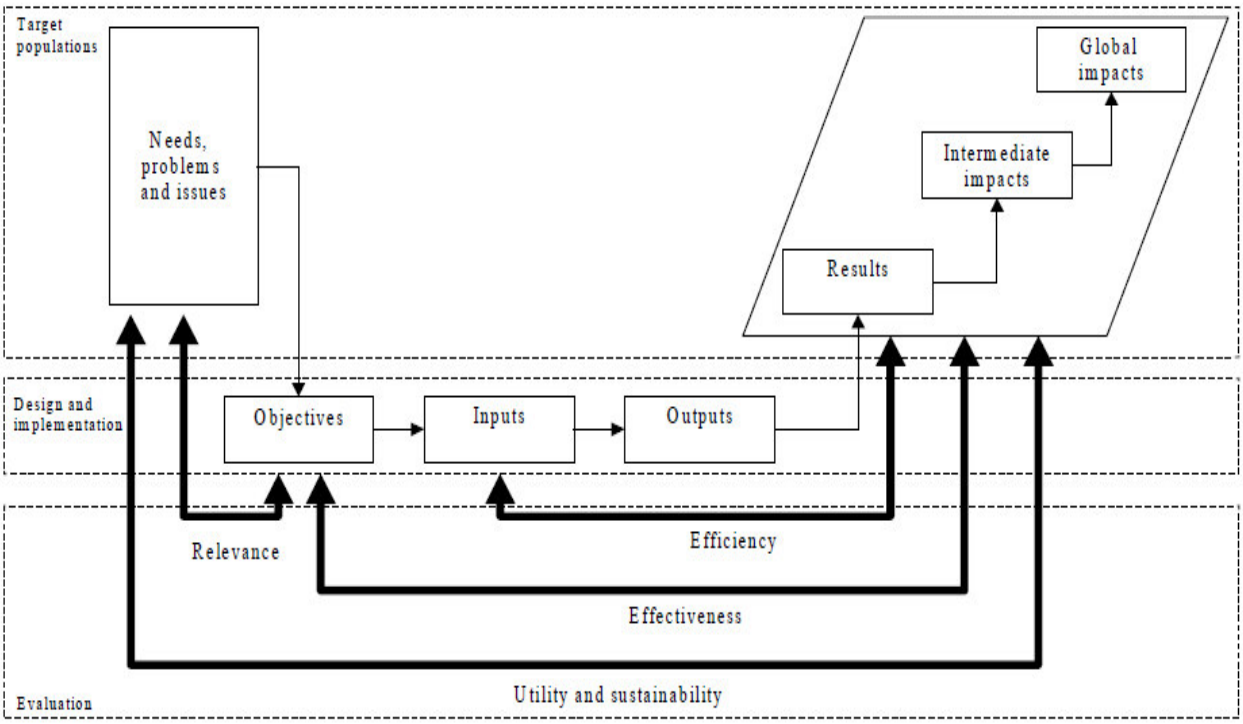
Source: Federal MOH HEP Guideline (2005) and Profile (2007)

Annex 6 Organisation of the HEP Supervisory team, Ethiopia



Source: Federal Ministry of Health HEEC (2007)

Annex 7 Framework for Evaluation of EU Activities



Source: European Commission (2005)