

Case Study
**SCALING UP EDUCATION AND TRAINING
OF HUMAN RESOURCES FOR HEALTH
IN ETHIOPIA**



Moving towards achieving the MDGs

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MESSAGE FROM THE EXECUTIVE DIRECTOR

Health workers are the cornerstone and drivers of health systems, yet they are dwindling in numbers across the world. Today, their shortage has been identified as one of the most critical constraints to the achievement of health and development goals.

This crisis is impairing the provision of life-saving interventions such as childhood immunization, safe pregnancy and delivery services for mothers, access to treatment for HIV/AIDS, malaria and tuberculosis, as well as for chronic diseases, which are increasingly affecting developing countries.

New and innovative initiatives are urgently needed to increase the number of trained health workers. This requires scaling up investment in education, skill-mix and remuneration of the workforce as laid out in the Kampala Declaration and Agenda for Global Action, endorsed in March 2008 at the First Global Forum on Human Resources for Health.

We must learn from examples of best practice. The Federal Democratic Republic of Ethiopia is one of the countries worst affected by the health workforce shortage and the case study presented here illustrates the country's efforts to scale up pre-service education for health-care workers through an innovative Health Extension Programme.

One of the key strategic directions of the Global Health Workforce Alliance is to support and promote evidence-informed decision-making for advocacy, strategic human resources for health (HRH) planning and successful implementation. Brokering knowledge is needed to share examples of good practice and evidence of what works to contribute to the development of a skilled, motivated workforce, as well as to provide links to information on training and capacity building. Success stories and strategies for HRH development to address the situation in crisis countries will facilitate policy formulation and implementation of HRH plans. By making this case study widely available, the Global Health Workforce Alliance intends to contribute to the visibility of a successful initiative, which will hopefully inspire similar endeavours.

We would like to thank the Honourable State Minister of Health of Ethiopia, Hon. Minister Dr. Tedros Adhanom Ghebreyesus, the Assistant and Adviser to the State Minister of Health, Dr Mohammed Abaseko, and all staff within the national authorities who collaborated in the preparation of this report. Our gratitude goes to all those who are contributing to the training and retaining of health workers, and to the health workers themselves, who are providing essential services to their communities.

Dr Mubashar Sheikh
Executive Director
Global Health Workforce Alliance
World Health Organization

FOREWORD

Human resources for health constitute the most vital cornerstone of health systems. They form the essential building blocks with which effective and comprehensive national health plans are built. A forward-looking strategy is urgently needed to accelerate efforts to develop sound national plans for human resources for health which give priority to sustainable investments in human capital. New and innovative technologies can radically transform the way health services are delivered. Without the availability of skilled and adequately trained health workers to carry out the tasks, however, these novel approaches will inevitably fall short of their goals. Urgent attention to human resources for health is thus crucial.

A core principle of the Millennium Development Goals (MDGs) - the United Nations platform which was adopted by the world community as the overarching framework for development at the beginning of this century—is that healthy people are essential for building a just and prosperous world. While encouraging progress has been made, the prospects of achieving the vision laid out by this ambitious action framework is now endangered by a critical global shortage of an estimated 4.3 million doctors, nurses, midwives and other trained health workers. It is high time that the issue of human resource for health figures prominently on the global public health agenda.

Ethiopia recognized early on the need to strengthen its health systems by investing in the training of its health workers. There is a pronounced shortage of health workers at every level in the country, but especially in rural areas where 85% of the population live and where the toll of a host of communicable and non-communicable diseases is most acutely felt.

Through our flagship Health Extension Programme, we have been able to train and deploy more than 30,000 Health Extension Workers in an innovative effort to provide universal access to essential health services and create healthier communities throughout the country. Beyond the smart deployment of existing human resources, our government has also been working towards expanding health worker training programmes at every level. We now have been able to reserve 20% of our higher education capacity for health sciences programmes, more than doubling our nation's public sector health workforce since 2003.

We are focusing our health worker training efforts on areas where we can save the most lives, including through appropriate use of the pragmatic task-shifting strategy. We have thus been engaged in a nationwide effort to train and place teams of specialized health officers, midwives and anesthesia professionals at each of the nation's 800 primary hospitals. These mid-level professionals will have the necessary skill-mix to handle common emergency obstetric, gynecological and surgical procedures that can greatly reduce maternal mortality. Soon, another programme will add several thousand new doctors to address the country's shortage of physicians.

Our experiences in Ethiopia have underscored three things: (a) the indispensability of country leadership and ownership of policies, strategies and interventions on human resources for health; (b) the imperative of striking a balance between urgent, practical action and careful planning for long-term sustainability guided by a clear policy framework; and (c) the crucial, yet often overlooked 'human element' of human resources. The latter, I believe deserves much greater attention. Indeed, given that health workers themselves are the most critical stakeholders, it is vital that they are well-engaged in the human resources for health planning process. Even as we work to increase the overall number of professionals, there is much that we can do to encourage those trained to care for the underserved as well as to enhance the contributions of those already in service by creating a more conducive and motivating work environment.

Across both the developed and developing world, stronger joint action is needed to develop the human resources we need to protect the lives of all the world's citizens. Without global cooperation to reverse the health workforce crisis, the healthy future envisioned by the MDGs will remain a dream.

I wish to thank the Global Health Workforce Alliance for documenting Ethiopia's strategies and ongoing efforts for human resources for health. It is my earnest hope that countries with similar challenges will find our experiences useful. In turn, we are committed to learning from the experiences of other countries, to refine and continue to scale-up human resources for health initiatives.

Hon. Minister Dr. Tedros Adhanom Ghebreyesus
Minister of Health of the Federal Democratic
Republic of Ethiopia

LIST OF FIGURES AND TABLES

AHOTP	Accelerated Health Officers Training Programme
BPR	Business Process Reengineering
BSc	Bachelor of Science
ESDP	Education Sector Development Programme
EHSP	Essential Health Services Package
GDP	Gross Domestic Product
HEW	Health extension worker
HEP	Health Extension Programme
HIV/AIDS	Human immunodeficiency virus/acquired immune deficiency syndrome
HO	Health officer
HRIS	Human Resource Information System
HSDP	Health Sector Development Plan
HERQA	Higher Education and Relevance Quality Agency
HRH	Human resources for health
HSS	Health systems strengthening
ICT	Information and communication technologies
MDG	Millennium Development Goals
MDTF	Multi-Donor Trust Fund
MSc	Master of Science
MPH	Master of Public Health
NGO	Nongovernmental organization
Obs/Gyn	Obstetrics and gynaecology
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PHC	Primary health care
PhD	Doctor of Philosophy
TVET	Technical and Vocational Education and Training
WHO	World Health Organization

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GLOSSARY

Accelerated Health Officer Training Programme (AHOTP): A special programme designed to increase the enrolment of health officer students using different strategies and methodologies, and to solve the shortage of faculty, learning materials and institutions for clinical affiliation.

Affiliated hospitals: Hospitals attached to health science teaching institutions (universities) that are used as a clinical teaching facility.

Health-care workers: All health professionals in the health-care system, including those working in the laboratory, pharmacy, environmental health, anaesthesia, health education, etc.

Bonding: A legal mechanism that obliges health workers trained in public health science teaching institutions to serve in the public sector for at least as long as the training provided.

Business Process Reengineering (BPR): “The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in [...] performance”.¹

Certificate: Award provided to health-care workers who complete a minimum of one year pre-service education at college or a Technical and Vocational Education and Training school.

Clinical specialist: A medical doctor who has successfully completed 2–4 years of additional training at university level, e.g. internist, surgeon, ophthalmologist, obstetrician/ gynaecologist.

Conventional or traditional education method: Hospital-oriented and discipline-based method of medical education that has been used for many years to train medical doctors over a six-year period in Ethiopia.

Degree: Award provided to health-care professionals who complete a minimum of three years pre-service education at university.

Diploma: Award provided to health-care workers who complete a minimum of two years pre-service education at college or university.

Formal health worker: Full-time health-care provider employed by a public or private institution (e.g. doctor, health officer, nurse, health extension worker).

General hospital: An establishment with more than 100 beds expected to provide curative services and training for a population of one million, staffed with specialists, medical doctors, nurses and allied health workers.

Generic health officer: A health officer student who has completed high school and fulfils the university entrance requirement.

Health centre: A primary health care unit expected to provide first level curative services for catchments populations of 25 000, staffed by a health officer, nurses and allied health workers.

Health extension worker: A formal community-level health worker who has completed one year education at a Technical and Vocational Education and Training school and expected to provide preventive and promotive health services at the *kebele* (village) level.

Health officer: A public health professional who has successfully completed 3–4 years of university education and expected to provide comprehensive health care, to manage and lead a primary health care unit, or form part of a team at the district or regional health bureau.

Health post: One of the satellite facilities of a primary health care unit and community-level health facility available in every *kebele* (village) aimed at providing preventive and promotive services at household level for a population of 5000, staffed by two health extension workers.

Health workers/technical staff to population ratio: The total number of formal health workers per 10 000 population in a given year.

Higher education: Health science education provided at university or college level that awards a diploma, first degree or above.

Health extension practitioner: A health extension worker who has served for a minimum of two years and completed an additional one to two years training on a health extension programme.

Informal health worker: A volunteer health-care provider in the community, e.g. traditional birth attendant, traditional healer, community health agent.

Integrated Emergency Obstetrics/Gynaecology and General Surgery Officers Programme, MSc: A two-year university programme aimed to enrol health officers who have successfully completed 3–4 years university education, served in public institutions for a minimum of two years and fulfilled the university entrance requirement. An additional year internship is required. Graduates are expected to be able to perform emergency obstetrics, gynaecological interventions and general surgery as well as comprehensive health care at primary hospitals.

Kebele: The lowest administrative level in governance in Ethiopia.

Medical doctor: A health professional who has successfully completed a minimum of five years plus a one-year internship at university and hospital level to practice medicine.

Midwife: A health-care worker who has been trained in midwifery education and skills for a minimum of two years at college or three years at university level.

New medical education: A programme designed to enrol first degree holders in science to be medical doctors in a shorter time than conventional methods.

Potential health service coverage: The percentage of the population covered based on existing health centres and health posts.

Post-basic health officer: A health officer student who has a diploma in nursing or midwifery and has served a minimum of four years in public health institutions and fulfils the university entrance requirements.

Primary (district) hospital: An establishment with 20–30 beds expected to serve 250 000 population, staffed with an integrated emergency

obs/gyn and general surgery officer, a medical doctor, a health officer, nurses and allied health workers.

Pre-service education: Education provided at higher education institutions (universities, colleges) before issuance of a licence as a health-care provider as a career.

Specialized hospital: A hospital expected to provide high-level, specialized services and medical education, staffed with super-specialists, specialists, medical doctors, nurses and allied health workers.

Specific health worker to population ratio: The total number of specific health workers per national target populations in a given year (e.g. the national target for health extension worker to population ratio is 1:2500).

Super/sub specialist: A health-care worker who was previously a clinical specialist and has successfully completed additional specific training at university level, e.g. cardiologist, nephrologist.

Standard staffing: The number and mix of health-care providers necessary at all health-care facilities allocated on the basis of calculated work load in Ethiopia.

EXECUTIVE SUMMARY

A well-performing health workforce is an essential building block in any effective health system. Ethiopia has been scaling up the pre-service education of health-care workers in order to solve the critical shortage of staff in health-care facilities, and ultimately to achieve the Millennium Development Goals (MDGs). The rationale for this case study is to share with countries and partners the lessons learnt and recommendations related to this scaling-up initiative in support of the Kampala Declaration and Agenda for Global Action, and achievement of the MDGs and other international health and development goals.

The Government of Ethiopia made a strategic decision that the ratio of higher education intake between natural sciences/engineering/technology and social sciences/humanities fields should be 70:30, with 20% of the total capacity of higher education committed for health sciences education. This policy led to the overall health worker stock in the public sector increasing from 28 320 in 2003 to 63 643 in 2008.

The Health Extension Programme (HEP) is an innovative programme with the aim of creating healthy environments and healthy living by making available community-based (*kebele*) essential health services to households. To provide coverage for the whole country, the Government decided to accelerate the implementation of the HEP by training 30 000 health extension workers at 15 000 health posts.

The philosophy of the HEP is that the right knowledge and skills are transferred to households that can then take responsibility for maintaining their own health. In this way, focus on sustained preventive health actions and increased health awareness will lead to more equitable access to health services.

A total of 30 190 health extension workers have been deployed during the study period and are currently playing an important role in delivering a wide range of community-based promotive and preventive services.

The goal of the Accelerated Health Officers Training Programme (AHOTP) is to meet the health needs of the population by providing essential health services at health centre level. Five thousand health officers were considered necessary to achieve this goal by 2010. There are currently 4768 post-basic students pursuing their AHOTP training.

The MDG to improve maternal health has a target to reduce maternal mortality by three quarters. The policy decision of the Ethiopian Ministry of Health in this regard is to develop a strategy to save lives by introducing the Integrated Emergency Obstetrics/Gynaecology and General Surgery programme. The aim of the programme is to train 1600 integrated emergency surgery officers to handle common emergency obstetric, gynaecological and general surgical procedures including trauma at 800 primary (district) hospitals by 2015. It is planned that a team of two integrated emergency surgery officers, two midwives and two anaesthesia professionals will be deployed at 800 primary hospitals by the end of 2015.

The main causes of the medical doctor shortage in the country are the inability to increase substantially training output, and the growing “brain drain” to more developed countries. The policy direction is therefore towards increasing the output of universities by scaling up pre-service medical education. The goal is to have enough medical doctors at each hospital level by 2015. Nine thousand medical doctors will need to be trained to reach this goal and, in turn, the relevant MDGs, which will require significant investment in both the universities and hospitals. The cost of scale-up for pre-service training of medical doctors is estimated at US\$ 902 million. Therefore, the Government has been looking for partner support to realize the goal.

In conclusion, if the current momentum of international partnership, political commitment and leadership continue, Ethiopia will have a sufficient number and mix of health professionals who can contribute to achieving universal access to health care and the health-related MDGs by 2015.

Recommendation: To solve the human resources for health crisis, countries need to tailor their scaling-up mechanism to address their specific health professional categories, and to develop targeted strategies. Political leadership, high-level commitment and readiness from the top to the grass-roots level are key determining factors to realize the scaling-up strategy and plan.

CHAPTER 1

INTRODUCTION AND BACKGROUND

In order to function well, health systems must carry out a number of basic functions. The World Health Organization (WHO) has categorized these functions into six essential building blocks, one of which is to make available a well-performing health workforce that is responsive, fair and efficient in achieving the best health outcomes possible, given available resources and circumstances.² The cornerstone of a well-performing workforce is to meet the requirements for human resources for health (HRH) at all levels of service delivery. WHO estimates that 4.3 million (one million for sub-Saharan African countries) additional health workers are required globally to achieve the health-related Millennium Development Goals (MDGs).³

Reduction of poverty and achievement of the development goals of a country cannot be achieved without accelerated implementation and scaling up of development of the health sector. Therefore, HRH education in Ethiopia is being scaled up to solve the critical staffing shortage in all primary health-care facilities towards achieving the Health Sector Development Plan (HSDP) major objectives by 2010 and ultimately towards achieving the MDGs.

This case study is organized into five chapters. This chapter outlines the rationale for the case study, data sources, information on how the health system functions in Ethiopia and the need to scale up its HRH education.

Chapter 2 presents the current situation and future plan to scale up human resources in Ethiopia in general, as well as a deeper review of the specific categories of professionals needed to solve the critical HRH shortage in the country.

Chapter 3 covers major human resource management issues. The chapter also discusses the current reform being undertaken by the Ministry of Health targeting the efficient use of existing human resources. It also discusses the regulation of professional practice, training institutions and health facilities.

Chapter 4 reviews how human resource expansion is financed and regulated in Ethiopia. In this chapter, the Government commitment and the support of partners in financing pre-service and in-service education are analysed.

In the fifth chapter, major achievements, lessons learnt and recommendations regarding the need to scale up HRH education, political commitment and strategic thinking are discussed and summarized.

1.1 RATIONALE FOR CASE STUDY

In line with the Global Health Workforce Alliance (the Alliance) strategic plan to promote countries' efforts to address the HRH crisis, Ethiopia has been rapidly and extensively scaling up the pre-service education and training of its human resources. The rationale for this case study is to share with countries and partners the lessons learnt and recommendations related to Ethiopia's scaling up of pre-service education for health-care workers towards realization of the Kampala Declaration and Agenda for Global Action and achievement of the health MDGs and other international health and development goals.

1.2 DATA SOURCES

This case study is based on a review of the available documents, concept papers, HRH strategy and literature published in Ethiopia by different organizations, and presents the most recent human resource-related data and reports from the Ministry of Health.

1.3 COUNTRY CONTEXT

1.3.1 Geographic, demographic, economic and governance profiles

Ethiopia is situated in the horn of Africa covering a land area of about 1.1 million square kilometres. Based on the Central Statistics Authority (CSA) 2007 Population and Housing Census, the total population of the country was 73 918 505, of which about 84% live in rural areas. The population growth rate is 2.6%. The male population is slightly higher (50.5%) than the female population (49.5%), and the population is dominantly young with 45% below the age of 15.⁴

Ethiopia's economy is based on agriculture, accounting for almost half of its GDP, 60% of its exports, and 80% of its total employment. It is still among the poorest developing countries with an annual average per capita income of US\$ 180 in 2006. Overall health and education expenditure were 6.1% and 16.5% of national spending respectively in 2007.⁵

Ethiopia is constitutionally a federal government composed of nine regional states; two city administrative councils are further divided into 800 *woredas* (districts) and around 15 000 *kebeles* (villages) – 5000 urban and 10 000 rural.⁴ The Ministry of Health has the mandate of providing

and regulating health-care services through Regional Health Bureaus. Due to the Government's commitment to decentralize further decision-making power, *woredas* are currently the basic units of planning and political administration.³

1.3.2 Policy framework

The development and provision of an equitable and acceptable standard of health services to all segments of the population of Ethiopia has been a major objective of the National Health Policy. The health sector strategy adopted to implement the policy focuses on giving comprehensive and integrated primary health care (PHC) in health institutions with a major emphasis towards community level services. To deliver on this commitment, preventive, promotive, curative and rehabilitative interventions are considered to be the minimum that people can expect to receive through the various health delivery mechanisms and facilities within their reach.⁶ The decentralized, equitable provision of public sector services, as stated in the National Health Policy, is built on the devolution of power to regional and *woreda* level governments, as well as on the meaningful participation of the population in local development.⁷ The policy also emphasizes the integration of health programmes in the health-care system and intersectoral collaboration, particularly in the formulation and implementation of appropriate strategies to improve nutrition and provide safe and adequate water for urban and rural populations.

Health System Organization

The Ministry of Health has been radically reforming health systems so that they function well to deliver services through accessible health facilities and operate with sustained financial support to meet health-related goals. Business Process Reengineering (BPR) of health service delivery is under way to reorient the health system in such a way that the service provider, service purchaser and regulation are independently organized in order to bring the desired institutional transformation to meet the mission of the health sector. To ensure the delivery of PHC services throughout the country, the health-care delivery system is being reorganized into four-tiers with sufficient health workers having the right skills and motivation.⁸

As shown in Figure 1, the health system pyramid includes:

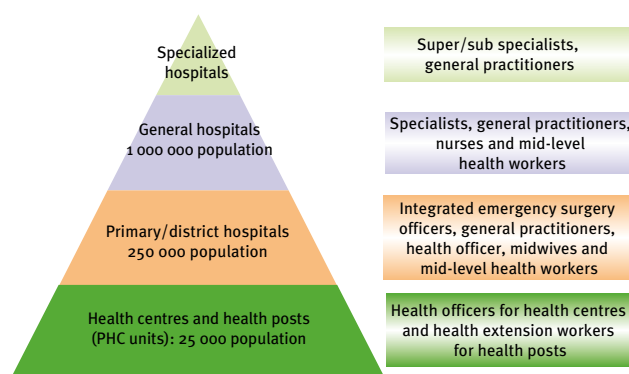
- Primary health care units comprising a health centre and five satellite health posts: health centres are staffed by health officers and mid-

level health workers, while health posts are staffed by two health extension workers (HEW). One health post is designed to serve 5000 people, while a health centre serves 25 000 people.

- Primary hospitals are staffed by emergency surgery officers, general practitioners, health officers, midwives and mid-level health workers who give comprehensive care to catchments populations of 250 000 people.
- General hospitals are staffed by specialists, general practitioners, nurses and mid-level health workers who provide general curative services and clinical training for health professionals.
- Specialized hospitals are staffed with super-specialists, specialists and general practitioners who provide sub-specialist care and clinical training^{7, 8}.

A referral system links health posts upwards to the specialized hospitals.

Figure 1. Health system pyramid, Ethiopia



Health-care provision in Ethiopia is predominately public. In recent years the role of the private sector has grown, so that today nongovernmental organizations (NGOs), private for-profit clinics, traditional practitioners and rural drug vendors together make up about 20% of all service provision.¹⁰

1.3.3 Health profile

The health status indicators of Ethiopia are among the lowest, even relative to other low-income and sub-Saharan Africa country indicators. For example, the average life expectancy at birth is 53.5 years for females and 50.9 years for males. The infant mortality rate (IMR) is 77/1000 live births; the under five mortality rate is 123/1000 live births and the maternal mortality ratio is very high at 673/100 000 live births.¹¹

The health problems behind this poor health status are preventable infectious ailments, nutritional deficiencies and complications of pregnancy and childbirth. Malaria, helminthiasis and respiratory tract infections are the major causes of outpatient visits at health institutions, and overall infectious and communicable diseases account for about 60–80% of the health problems in the country. Widespread poverty, low levels of education, inadequate access to clean water and sanitation facilities, and limited access to health services have contributed to the high burden of ill-health in the country, aggravated by the high population growth. Moreover, evidence indicates that noncommunicable diseases are also emerging, changing the pattern of disease burden.³

1.4 RATIONALE FOR SCALING UP HRH EDUCATION IN ETHIOPIA

Stepping up investment in health systems is crucial in order to meet the health targets of the MDGs. This is particularly true in Africa. If access to good quality health services can be increased and sustained, this should have major benefits for the control of malaria, tuberculosis and HIV/AIDS and will positively impact efforts to control other diseases.¹² HRH at all levels of service delivery is a cornerstone to achieve the health-related MDGs. Yet Ethiopia is among the 57 countries identified with a critical shortage of health workers. These countries would need to increase their workforce by about 140% to achieve enough coverage for essential health interventions to make a positive difference in the health and life expectancy of their populations.³

The ratio of formal health workers (public sector employees) to the population was about 0.86/1000 people in 2008 which is very low compared to developed countries. The situation is particularly severe in large as well as underserved regions.¹³

The shortage of key health workers is being aggravated by the country's inability to increase substantially training output as well as by increasing migration of HRH to middle-income African countries and developed countries worldwide.

These are the reasons why HRH education is being scaled up in Ethiopia.

1.5 HEALTH SECTOR DEVELOPMENT PROGRAMME

Ethiopia is committed to address the abject poverty it faces in a comprehensive and rapid manner through the adoption of the Sustainable Development and Poverty Reduction Programme

and achievement of the MDGs. Health interventions will play a crucial role in these endeavours. In response to the policy framework described above, the Government has developed a 20-year rolling Health Sector Development Programme (HSDP) which proposes long-term goals for the sector and the means to attain them in a step-wise manner.¹⁴

The national Plan for Accelerated and Sustained Development to End Poverty (PASDEP) is an overall framework for the development and guiding strategy to end poverty in Ethiopia. The HSDP evidently indicates the special role of health in sustaining development and ending poverty towards the achievement of the MDGs.

The third phase of the HSDP (HSDP-III), covering the period June 2005 to October 2009, is now in its fourth year of implementation and is aligned with wider policy frameworks such as PASDEP and the MDGs. Each phase of the HSDP has clear strategies for making targeted interventions against poverty-related diseases, particularly HIV/AIDS, malaria and tuberculosis. Other focus areas of interventions are child survival, reproductive health and maternal health care. The major objectives of the HSDP-III are:

- to cover all *kebeles* with the Health Service Extension Programme (HSEP) to achieve universal PHC coverage by October 2009;
- to reduce the maternal mortality ratio from 673 to 600 per 100 000 live births;
- to reduce the under five mortality rate from 123 to 85 per 1000 live births and infant (under one) mortality rate from 77 to 45 per 1000 live births;
- to reduce the total fertility rate from 5.4% to 4.0%;
- to reduce the adult incidence of HIV from 0.68 to 0.65 per 1000 population and maintain the prevalence of HIV at 1.4;
- to reduce morbidity attributed to malaria for all age groups from 22% to 10%;
- to reduce the case–fatality rate of malaria in groups aged five years and above from 4.5% to 2.0% and the case–fatality rate in children under five from 5% to 2%; and
- to reduce mortality attributed to tuberculosis from 7% to 4% of all treated cases.

To achieve these objectives and improve the health status of Ethiopians requires 15 000 health posts, 3200 health centres and 800 primary hospitals with standard staffing.¹⁴ The scale-up of HRH education and the deployment of health professionals based on this facility expansion requirement and population growth has been progressing with stakeholder support.

Current policy direction

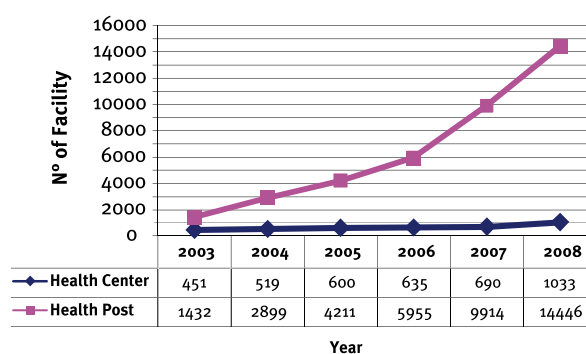
Assessments carried out have identified systemic shortcomings that hamper the delivery of all health services, but especially those pertaining to family health, particularly in remote areas. To address these issues, the Government is reinforcing the HSDP with a strong community-based component centred on the Health Extension Programme (HEP). The HEP will make essential health care universally available through a package of preventive, promotive, minimum curative and rehabilitative services provided by HEWs. Frequently described as a “flagship programme”, the HEP has four major components: i) family health, ii) disease prevention and control, iii) personal hygiene and environmental health, and iv) health education and first aid.¹⁵

Through effective implementation of the HEP, which constitutes the primary health care unit at the community level, the government intends to deploy two HEWs and construct health posts in each *kebele* (5000 people) by 2008.⁹ Another prominent plan to accelerate PHC provision was the expansion of health centres deploying health officers to provide comprehensive health services.⁷

Figure 2 indicates the PHC facility expansion between 2003 and 2008. The expansion of health

posts has progressed very well in the last six years, but the expansion of health centres was only incremental from 2008.^{9,10} The number and ratio of health facilities to population has been improving, with the potential health service coverage in 2008 estimated at 89.6%.⁹ The coverage varies among regions, and use varies depending on geographical distance from a health facility and the socioeconomic group.

Figure 2 : PHC facility expansion



* Number of health centres and health posts for 2008 is a recent development of the Planning and Programming Department of the Ministry of Health.

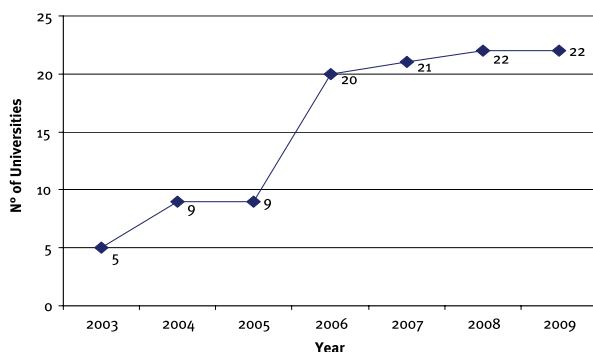
CHAPTER 2 EXPANDING HUMAN RESOURCES FOR HEALTH: CURRENT SITUATION AND PLAN

2.1 EXPANSION OF PUBLIC SECTOR PRE-SERVICE EDUCATION AND TRAINING

The mandate of running all higher education, including health, is under the Ministry of Education in Ethiopia. The Government is implementing a strategy of expanding higher education in the country as a part of the Education Sector Development Programme (ESDP) which falls mainly under ESDP-III (June 2005 to October 2009).

The Government made a strategic decision that the ratio of intake between the natural sciences/engineering/technology and the social sciences/humanities fields should be 70:30. This decision focuses on developing a critical mass of well-educated human resources, particularly in the field of science and technology, that are more competitive, and on accelerating development towards becoming a middle-income country in the coming two decades. Figure 3 shows the expansion of universities in the last 10 years.¹⁶

Figure 3 : Trend in expansion of Universities in Ethiopia



In 1999, there were only four universities. Today, 22 universities are functioning in full capacity, and an additional 10 are under construction. Investment in this infrastructure expansion has been fully committed to by the Ethiopian government.¹⁷ As shown in Figure 4, 20% of the total 110 000 student intake capacity in 2009 will be health science students.

The number of HEWs and HOs increased three-fold between 2006–2008, showing that the scaling-up of PHC workers in Ethiopia has progressed very rapidly in the last two years (Figure 5). The overall health worker stock in the public sector increased from 28 320 in 2003 to 63 643 in 2008.^{9, 10}

Figure 4 : Total versus health sciences student enrolment

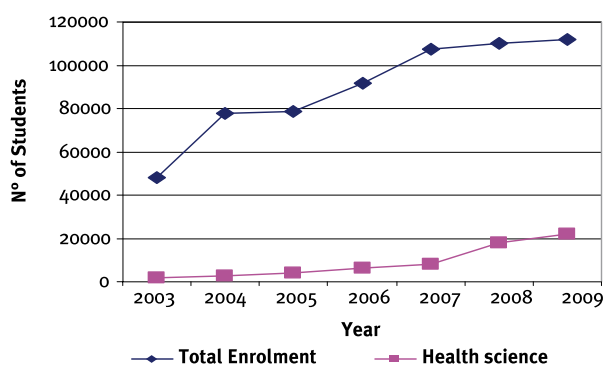
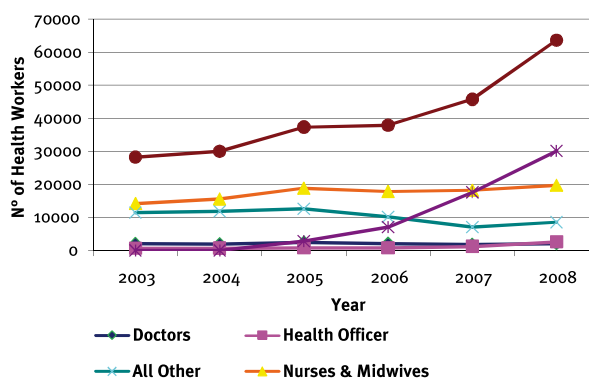


Figure 5 : Health worker stock by year



* Other categories of health-care workers: pharmacy, laboratory, radiology, environmental health, health education, physiotherapy, anaesthesia.

Table 1 indicates that the scaling-up of HRH education has contributed significantly to improving the health worker to population ratio. The target for specific health worker to population ratio shows that Ethiopia has already achieved the planned scale-up of nurses and HEW ahead of schedule.^{9, 10}

As indicated in Table 2, the overall technical staff/population ratio increased from 0.43 in 2003 to 0.86 in 2008 based on the 2007 population census of 73 918 505 and a population growth rate of 2.6%. Although growth in the five-year period was 50%, it is still far from other developing and developed country health worker/population ratios.^{9, 10}

Table 1: Category of health professionals/population ratio, 2004–2008

Professional category	2004		2008		Target ratio for 2001
	Number	Population ratio	Number	Population ratio	
Doctors	1996	1:34114	2085	1:38859	1:10000
Health officers	683	1:99694	2586	1:29354	1:12500
Nurses	15544	1:4380	19705	1:3314	1:5000
Health extension workers	0	0	30190	1:2514	1:2500

* Number of health officers, nurses and HEWs for 2008 includes the current deployment (source: Human Resources Department, Ministry of Health)

Table 2: Technical staff/population ratio by year, 2003–2008

Year	Total	Ratio
2003	28320	0.43
2004	30066	0.44
2005	37397	0.53
2006	37996	0.53
2007	45806	0.62
2008	63643	0.86

2.2 EXPANSION OF PRIVATE SECTOR PRE-SERVICE EDUCATION AND TRAINING

Health sciences in Ethiopia are taught by the Government and by the private sector. The private sector health science teaching institutions have expanded from just a few 10 years ago to 9 colleges that provide degree level and 38 that provide certificate or diploma level training in 2008.¹⁷ It is clear that the expanded private sector has a great contribution to make to scaling up training of HRH in the country.

Health science categories provided so far by private colleges in Ethiopia are: medical doctors, nurses, public health specialists, laboratory technicians, pharmacy technicians, radiographers, midwives and environmental health professionals. Private teaching institutions and their programmes, including curricula, have to fulfil all Higher Education and Relevance Quality Agency (HERQA) requirements and standards.

2.3 SCALING UP TAILORED TO COUNTRY NEEDS

2.3.1 Health extension workers

Policy direction

In response to the country's health problems, the Government introduced Accelerated Expansion of Primary Health Care coverage and the Health Extension Programme (HEP). The new health policy focuses mainly on providing quality promotive, preventive and selected curative health-care services in an accessible and equitable manner to reach all segments of the population, with special attention to mothers and children.

The HEP is an innovative programme with the aim of creating a healthy environment and healthy living by making available community-based (*kebele*) essential health services targeting households. To provide coverage for the whole country, the Government has decided to accelerate the implementation of the HEP by training 30 000 HEWs deployed at 15 000 health posts.

Philosophy of the Health Extension Programme

The philosophy of the HEP is that the right knowledge and skills are transferred to households, who can then take responsibility for generating and maintaining their own health. By so doing it is envisaged to improve equitable access by focusing on sustained preventive health actions and increased health awareness.

Goal and objectives of the Health Extension Programme

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

- to improve access to and the quality of preventive essential health interventions at the village and household level in line with the decentralization process to ensure health-care coverage to the rural areas;
- to ensure ownership and participation by increasing health awareness, knowledge and skills among community members;
- to promote gender equity in accessing health services;
- to improve the utilization of peripheral health services by bridging the gap between the communities and health facilities through HEWs;
- to reduce maternal and child mortality;
- to promote a healthy lifestyle.

Implementation strategy

The four major implementation strategies planned are:

- Human resources: to train 30 000 HEWs;
- Construction: to construct 15 000 health posts and furnish them with basic equipment;
- Procurement: supplies of medicines, contraceptives, vaccines, etc.;
- Financing: to employ more than 30 000 HEWs.

Components to be delivered at community level

HEWs are responsible for delivering the following four packages of promotive and preventive services at community level.

- Disease prevention and control
 - HIV/AIDS and other sexually transmitted infections (STI) and TB prevention and control
 - Malaria prevention and control
 - First Aid emergency measures
- Family Health
 - Maternal and child health
 - Family planning
 - Immunization

- Nutrition
- Adolescent reproductive health

- Hygiene and environmental health
 - Excreta disposal
 - Solid and liquid waste disposal
 - Water supply and safety measures
 - Food hygiene and safety measures
 - Healthy home environment
 - Control of insects and rodents
 - Personal hygiene
- Health education and communication
The following requirements have to be fulfilled to be trained as a HEW:
 - Being a resident of the *Kebele*
 - Being female of 18 years and above
 - Complete high school education
 - Recommendation from *kebele* administration (village) in order to ensure acceptance by community
 - Volunteer to serve her own community

A selection committee comprises one member nominated by the local community and a representative from the *woreda* offices of health, capacity building and education.

Following selection, the trainees have to complete successfully a one-year course of training, including practical sessions. This training for HEWs is held at the Technical and Vocational Education Training (TVET) School of the Ministry of Education with support from the Ministry of Health, the Regional Health Bureau, and health service management at different levels. Forty TVET schools have been involved and more than 140 TVET tutors engaged in training HEWs throughout the country.

Health extension approaches

Four major approaches have been used to deliver the health extension packages:

- HEWs are required to spend 75% of their time conducting outreach activities by going from house to house to help mothers to provide care to newborns and children, cook nutritious food, and advise on the construction of latrines and disposal pits, etc.
- HEWs identify and train model families that have been involved in other development work and are acceptable and credible within the community.
- The HEP communicates health messages by involving women, youth and traditional associations (e.g. *Idir*, *mehaber*, *equb*), schools, etc.

- The package provides family planning, delivery services, immunization, growth monitoring, referral and first aid services at health post level.

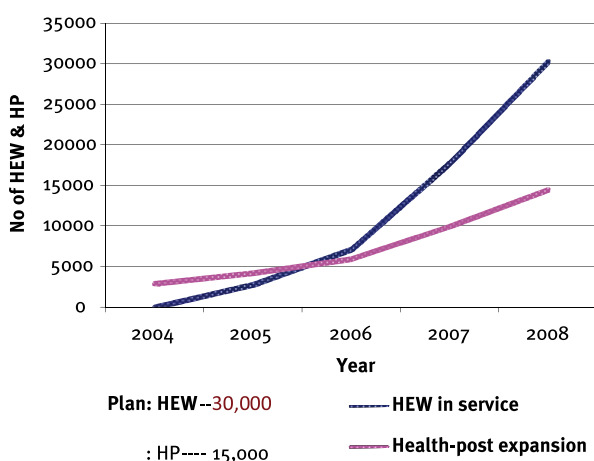
Governance of the HEP has political and administrative leadership at all levels. HEWs are *kebele* cabinet members, which makes good relationships with decision-makers at grass-roots level. The *kebele* administration has linkages with the *woreda* administration and health office and receives support for its financial and administrative needs. The health centre, led by a health officer, is responsible for providing technical support to HEWs in its catchment area.

Programme outcome and achievements to date

The HEP brought about considerable improvements in access and use of services, which should be reflected in the health status of the population. The programme is implemented by deploying at each *kebele* two salaried female HEWs who are trained for a year at a TVET centre. The HEP constitutes the bottom level of the Essential Health Services Package (EHSP) of the country and is primarily preventive and promotive in nature, while basic curative care starts at the health centre level.¹⁸

As indicated in Figure 6, the scale-up plan was successfully achieved. From no HEWs in 2004, 30 190 were posted at service delivery level at the end of 2008. The data also indicates a significant improvement in HEW/population ratio from 1:4374 in 2007 to 1:2514 at the end of 2008 (the target was 1:2500).

Figure 6. Scaling up of Hew and Health posts



The HEP ensured equitable access to services because it reaches all the 15 000 *kebeles*, while its linkage with a health centre brings all essential health services close to the community. Its implementation involves individuals, particularly

mothers, and uses all the available community organizations.

The HEWs are deliberately female to facilitate effective communication with mothers and encourage them. This is a culturally acceptable approach rather than male health workers dealing with individual mothers and households. They are recruited from their residential *kebele* as this is the opportunity to provide packages easily to mothers who already knew them.

HEWs and the HEP will change the capacity of the sector in many ways. Health extension brings services to all, detects patients and clients that need further attention, and refers them in a timely manner. HEWs can also detect defaulters from various programmes, and will make a pool of HRH out of which other categories of health workers will be produced after further training.

Challenges

The programme has faced a number of challenges from the outset. The annual review meetings of the HSDP have highlighted (a) gaps in practical skills and (b) insufficient capacity to provide supportive supervision/monitoring and evaluation as key challenges to the success of the programme.⁹

Measures taken to solve challenges

Integrated refresher and supervisory skill training were provided through a cascading approach. Training of trainers was provided for HEP coordinators from Regional Health Bureaus, who then trained *woreda* health office and health centre staff. Thereafter, the *woreda* health office and health centre team is in turn responsible to conduct similar training for HEWs in their catchments. This training further extends to volunteer community health workers in the *kebele*.

Programme support

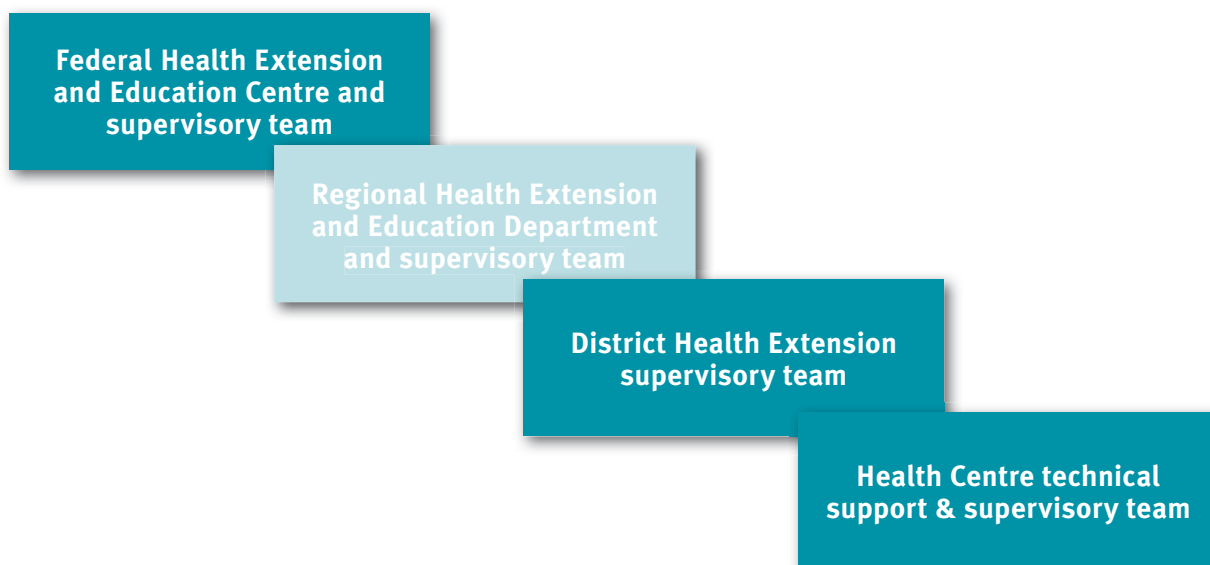
All health worker education and training in the country has been institutionalized and sustainable. The HEW training programme was supported and financed by the following stakeholders and partners: Ministry of Education and Ministry of Health, Ethiopia; World Health Organization; US Agency for International Development; GAVI; United Nations Children's Fund; UK Department for International Development; Global Fund to Fight AIDS, Tuberculosis and Malaria; and the Carter Center.

Health extension worker employment and career

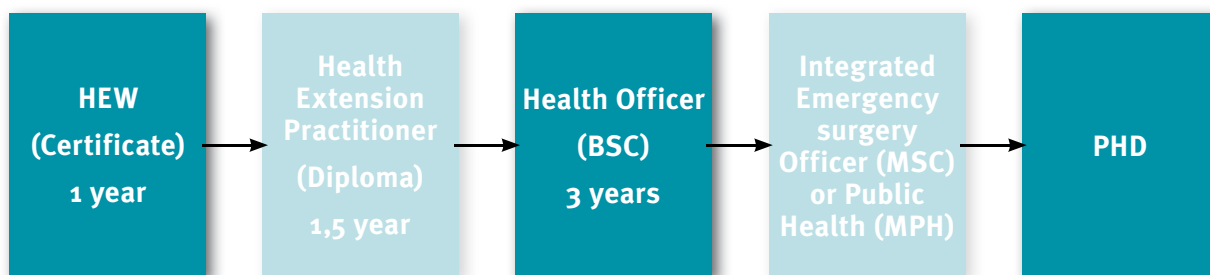
Currently 30 190 HEWs are permanently employed by the Government at district level. An HEW career plan is as follows.¹³

The opportunity to pass to the next career stage is based on the best performance of the assigned job, competency and fulfilling college or university entrance requirements.

Impact of the health extension programme



Organizational coordination of the health extension programme



The implementation of this programme which started in 2005 has progressed well in a short time. The number of HEWs in the health sector has been increasing as a result of strong government commitment and political leadership. This infusion of HEWs will have a great impact on the quality of life of households throughout the country.

Favourable changes have been seen in the coverage of major health programmes, particularly immunization, family planning, environmental health and malaria control. A total of 20 million insecticide-treated nets were distributed, two to each household in malaria endemic areas, simultaneously with other interventions. Following this intervention, a reduction in malaria morbidity and mortality was observed in three Ethiopian health facilities at 48%, 54% and 55%, respectively in 2007 as compared to the baseline period 2001–2004. Furthermore, no epidemic of malaria was observed in 2007–2008. The overall increase

in immunization in Ethiopia was much steeper than the average increase in sub-Saharan African countries,¹⁹ progressing from 61% in 2004 to 81% in 2008.¹⁰

The overall trend from 2004 to 2008 in maternal health services increased from 23% to 51% for contraceptive acceptance rate, and from 44% to 59% in antenatal coverage.

It is recommended that the overall contribution and impact of the HEP should be studied further in the coming years towards improving the quality of life and reducing morbidity and mortality.

2.3.2 Health officers

Policy direction

Based on Ministry of Health data, only 683 health officers were working in the public health service system in 2004. The major cause of the problem

is insufficient output from existing universities to satisfy the demand on the ground. Hence, the AHOTP was initiated by the Ministry of Health to scale up the number of health officer graduates in a short time. The challenge of providing health services to the entire community is well recognized by policy-makers and leaders of the health system in the country. Eighty per cent of the disease burden in Ethiopia is communicable and can be prevented through expansion of PHC services at grass-roots level. The PHC units with essential curative, preventive and promotive services have to be managed by health officers at health centre level serving 25 000 catchment populations. It was strongly believed that training health officers using the Accelerated Health Officers Training Programme (AHOTP) would greatly assist implementation of the HSDP and achievement of the MDGs, thereby bringing rapid improvement in the prevailing health situation of the country.

Goals and objectives

The goal of the AHOTP is to meet the health needs of the population by providing essential health services at health centre level. The objectives of the programme²⁰ were to train 5 000 health officers to be able to:

- assess community health needs
- identify and intervene in health-related problems of the community
- provide curative, promotive and rehabilitative health services
- prevent and control diseases
- manage health services and health offices at various levels
- undertake essential research.

Implementation strategy

Five strategies were developed for the programme:

- increase intake from the regular programme
- increase intake from the post-basic training programme
- improve the capacity of universities
- use government hospitals and their staff for teaching and clinical practice
- develop joint monitoring and evaluation mechanisms among stakeholders and partners.

The education strategies used in the AHOTP were:

- student-centred
- problem-solving

- team-building
- community-based.

The curriculum incorporated problem- and task-oriented teaching and learning mechanisms to prepare the graduates to be fully responsible and able to execute the curative, preventive, promotive and rehabilitative health services. In addition, the graduates will manage the health institutions they will be assigned to in a team work and community-based spirit. The AHOTP is organized in line with the new educational policy of the country, i.e. reducing the freshman courses from the training programme except the essential courses not covered during the preparatory phase.^{20, 21}

The degree nomenclature is Bachelor of Science in Public Health.

Recruitment criteria to enrol students:

- Meet the criteria of higher education to join the higher learning institutions
- A minimum of two years in nursing or midwifery in addition to the higher education entrance criteria for post-basic students.

The duration of training for students who enrol after completion of high school is four years, while post-basic students must complete three years of theoretical, practical and internship courses.²⁰

Programme implementation, monitoring and achievements

The training programme is being conducted in eight universities – Alemaya, Arbaminch, Gondar, Hawasa, Jimma, Mekelle, Wolega and Wolita – as well as using around 20 selected government hospitals affiliated to universities for the training.²²

In addition to university hospitals, public hospitals have been transformed into teaching hospitals and upgraded to be able to provide this programme. These additional institutions and teaching staff have thus built capacity to solve the shortage of faculty and institutions.

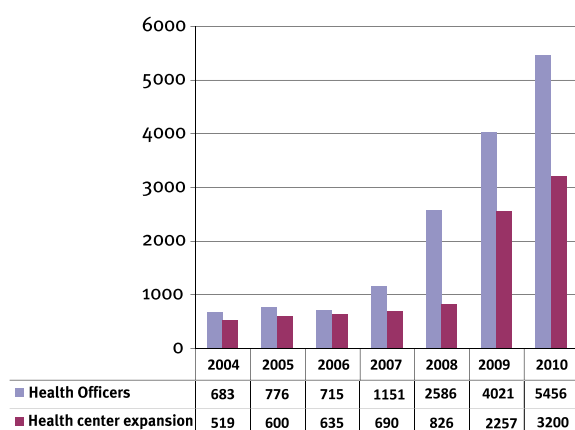
The following strategies have been used to ensure the quality and standard of the programme.

- Recruitment of qualified teaching staff
- Continuous assessment of the students' performance using examinations and class tests
- Supervised practices in the training hospitals and health centres
- Availability of up-to-date text and reference books, laboratory equipment and reagents as well as consumable and non-consumable medical instruments and demonstration materials

- Feedback from graduates and employers
- Periodic evaluation of the curriculum and the programme in general.

The objective of the AHOTP was to produce 5 000 health officers by 2010. There are currently 4 768 post-basic students pursuing their health officer training, many of whom are nurses who were encouraged to enrol. The plan is to deploy one health officer per health centre and two per primary hospital. With current enrolment capacity, enough health officers will be available at all 3 200 health centres and 800 primary hospitals by 2015 (Figure 7). Hence, by the end of the accelerated programme, over 5 500 health officers will have been trained. It is expected that this infusion of trained staff will make a major contribution towards meeting the health components of the MDGs.²²

Figure 7. Scaling up of HO and HC



The network of universities providing AHOTP has established a platform to empower future generations to solve problems such as a shortage of learning materials. This network is the first of its kind and has been expanding to newly established Ethiopian universities.²¹

The AHOTP is monitored and evaluated at federal level joint meetings between the Ministry of Health and the Ministry of Education in collaboration with 8 universities, 7 regional health bureaus, 21 hospitals selected for training, the Carter Center and USAID. These quarterly meetings are regularly chaired by the Ministries of Education and Health, a partnership that strengthens the programme and builds the capacity of training institutions beyond the AHOTP.

Programme support and employment

The health officers' programme has been supported financially and technically by different donors and partners, especially the Carter Center and

USAID, in collaboration with the universities and the Ministry of Education and Ministry of Health. The support focuses on renovation of affiliated hospital classes and library furniture, vehicles and developing health learning materials (lecture notes, modules and manuals) that address the practical health problems of Ethiopia. Support also goes to improving the knowledge and skills of faculty and instructors in teaching, writing, HIV core competencies, essential nutrition, and reproductive health/safe motherhood. Finally, the teaching-learning environments are improved by providing textbooks and reference materials, journals, teaching aids, office and laboratory equipment, models, basic consumables, diagnostic supplies and infection prevention materials.²¹ The Ministry of Health and the regional health bureaus are responsible for the employment of all graduates.

2.3.3 Integrated emergency obstetrics/ gynaecology and general surgery officers

Policy direction and internalizing key problems

In many developing countries, complications of pregnancy and childbirth are the leading causes of death. More than 80% of maternal deaths worldwide are caused by five conditions, namely haemorrhage, sepsis, obstructed labour, hypertensive disease from pregnancy and unsafe abortion. More than half a million women die each year during pregnancy or child birth; 99% of these deaths occurred in developing countries. Ethiopia has had consistently high maternal (673/100 000) and infant (77/1000) mortality rates and trauma-related morbidity and mortality.¹¹

Ethiopia has been training gynaecology/obstetrics specialists for many years, but the number of graduates per year has been very low. In addition to this, attrition to the private sector and migration are very high. These high-level specialists have not been deployed at district (primary) hospitals. The Government decided to use them at general and specialized hospitals to train health professionals and manage complicated cases referred from lower levels.

Goal and objectives

One of the MDGs is to improve maternal health and the target is to reduce maternal mortality by three-quarters by 2015. The policy decision of the Ministry of Health to this end has been to develop a strategy that will ensure and save many lives by introducing a programme to train 1600 Integrated Emergency Obstetrics/Gynaecology and General Surgery Officers to handle common emergency obstetric, gynaecological and general surgical procedures, including trauma, at 800 primary hospitals by 2015.

Implementation strategy

Four strategies were developed for this programme:

- initiate a new post-basic training programme
- improve university capacity
- use government hospitals and their staff for teaching and clinical practice
- develop joint monitoring and evaluation mechanisms among stakeholders and partners.
- recruitment criteria to enrol students

Trainees must have successfully graduated as health officers from university and provided the best in-service performance for at least two years in order to enrol to be trained for the additional three years at MSc level in the Integrated Emergency Obs/Gyn and General Surgery programme.

Expected knowledge and skills after graduation

The graduates are expected to be able to perform and handle:¹⁵

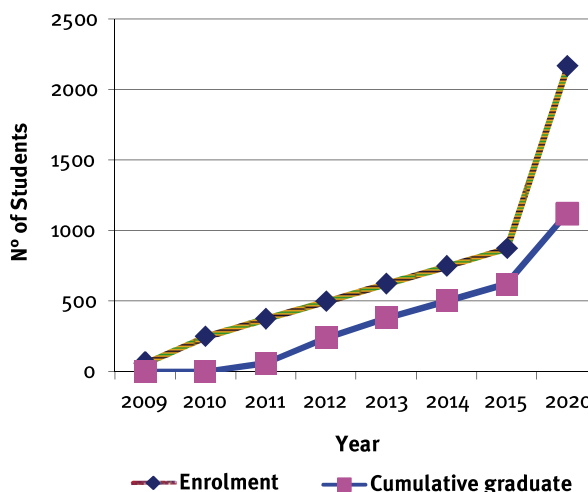
- Emergency caesarean-section
- Hysterectomy
- Vacuum extraction
- Craniotomy
- Laparotomy for tubal pregnancy
- Appendectomy
- Bowel perforation repair
- Colotomy
- Fracture and dislocation
- Amputation
- Tracheostomy
- Emergency medical problems
- Intra-operative and post-operative complications
- Research

Programme implementation

The enrolment plan for the Integrated Emergency Obs/Gyn and General Surgery Officers programme started at the beginning of 2009 in the five universities that already had experience with the health officers programme using affiliated hospitals. The intake capacity of universities is 10-15 trainees for the initial year and is expected to rise to 20-25 students yearly. Therefore, by the end of 2015 there should be 500-600 graduates (Figure 8).²³ The plan is to deploy two integrated

emergency obs/gyn and general surgery officer graduates along with midwives and anaesthesia professionals as a team at 800 primary hospitals by the end of 2015.

Figure 8. Emergency OBS/GYN scale-up plan



Monitoring the programme

The Integrated Emergency Obs/Gyn and General Surgery Officers programme is to be monitored and evaluated at federal level through quarterly joint meetings between the Ministry of Health and Ministry of Education in collaboration with five universities, regional health bureaus, hospitals selected for training and the United Nations Family Planning Association (UNFPA). These joint meetings are to be chaired by the Ministries of Education and Health.

Programme support and employment

This programme is owned by the Ministry of Education and involves universities to assure sustainability. The Ministry of Health and UNFPA are partners that assist technically and financially in the realization of the programme. The graduates will be employed by the Ministry of Health and regional health bureaus.

2.3.4 Medical doctors

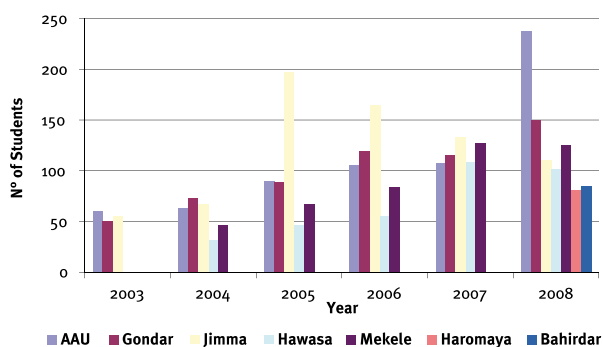
Policy direction and internalizing key problems

The major limiting factor to improve the health status of the people is the availability of a well-trained health workforce with a good skill mix. In the last few years, the Ministry of Health has made great progress in terms of increasing the number of health officers, mid-level professionals and community-level health workers.

Nonetheless, a serious shortage of certain categories of health professional, e.g. medical

doctors, remains along with geographic and public-private imbalances. Moreover, the current ratio of medical doctors to population is 1:39 000, which is very low compared to other developing countries, and still one of the lowest ratios in sub-Saharan Africa. Following a six-year medical training, the number of graduates per year has not exceeded 200 over the last several years (Figure 9).¹⁰

Figure 9. Intake of medical doctors



The main cause of the medical doctor shortage in the country is the inability to increase substantially training output as well as the increasing brain drain to more developed countries. In recognition of this problem, the Government decided to overcome the root cause at policy level and increase the output of universities by scaling up pre-service medical education.

Goal and objectives

The goal of scaling up medical education is to have sufficient medical doctors at all hospital levels towards achieving the MDGs by 2015. The objective is to train 9 000 medical doctors using different strategies.²²

Implementation strategy

The following seven strategies are designed to increase enrolment:

- Increase the intake of existing universities teaching medical doctors
- Initiate medical education programmes in universities not previously involved in medical education
- Use public hospitals as a training node
- Involve clinical specialists from the private sector to solve the shortage of faculty
- Use innovative medical education methodology
- Involve partners
- Create a joint monitoring and evaluation system.

Two approaches are proposed to increase the output of universities: use the existing six-year curriculum; and initiate a four-year curriculum.

Recruitment criteria

Must have completed high school and preparatory education and pass higher education (university) entrance requirements for the six-year programme.

Must have graduated in health sciences or natural sciences from university and pass the entrance examination for the four-year programme.

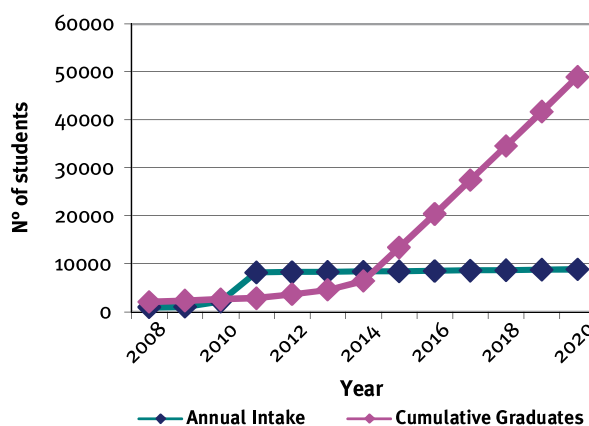
Therefore, the pool of applicants will comprise students from both secondary school and those who have a first degree.¹³

Programme implementation and scaling-up plan for the training of medical doctors

The Government of Ethiopia plans to have enough medical doctors in a very short time by designing an alternative and efficient programme of education. The plan will follow a two-pronged approach: strengthening and increasing the intake of existing medical schools as well as opening medical schools in other universities. As at 2009, enrolment is limited to the existing medical schools through increasing their intake, while the new universities will use this period for preparation of the necessary infrastructure as well as hiring of faculty.²²

Details of the annual intake and the expected number of graduates under this plan are summarized in Figure 10. By implementing the proposed plan, the target of 9 000 medical doctors should be reached by 2015 and maintenance and excess production continued. By the end of the scaling-up plan in 2020, there should be three times as many medical doctors in Ethiopia. It is expected that the pool will still be needed to replace graduate programme entrants, turnover and attrition.

Figure 10. Scaling up plan for medical doctor training



Programme monitoring and evaluation

The monitoring and evaluation experience used in the AHOTP will be implemented in this programme.

Programme support and financing

The enrolment of 9 000 medical students during 2010-2015 requires significant investment both

in the universities and hospitals in order to reach the targets. The total cost of the scale-up for pre-service training of medical doctors is estimated at US\$ 902 million, of which US\$ 210 million is for capital investment and US\$ 692 million for recurrent investment.²⁴ Therefore, the Government has been looking for partner support to realize the scaling up plan as indicated.

CHAPTER 3

IMPROVING HUMAN RESOURCE MANAGEMENT AND LEADERSHIP

3.1 THE CAPACITY BUILDING STRATEGY

The Government's Capacity Building Strategy aims at strengthening the overall capacity of Government institutions at all levels for effective implementation of development activities. It is a comprehensive approach in that it tries to address their institutional, systems and human resource aspects. Through this strategy, a Civil Service Reform Programme (CSRP) with results-oriented performance is being introduced into the public sector, including the health sector. The initial input to the health sector has been rewarding and encouraging thereby supplementing the efforts being made to make health service delivery effective and efficient.⁸

The CSRP has five sub-programmes: i) Expenditure Management and Control; ii) **Human Resources Management**; iii) Service Delivery; iv) Top Management Systems; and v) Ethics Reforms.

Information and Communication Technology (ICT) is a policy issued under the Capacity Building Strategy that considers the convergence of computing, telecommunication, broadcasting technologies and the need for systemization of access and preservation of information. It is designed with the aim of using ICT to enhance the efficiency, effectiveness and transparency in the civil and public service, and maximize connectivity to the global information infrastructure, among others. In the health sector, the aims of the ICT applications are to:

- to modernize health service administration
- to set up and expand telemedicine
- to improve the access of health professionals and the public to up-to-date health information.

Implementation of the health component of this policy is given considerable attention in the HSDP-III.³

3.2 PLANNING, MONITORING AND EVALUATION

To guide and monitor the HRH scale-up as well as to coordinate the role of different partners, the Ministry of Health has been developing a comprehensive HRH strategy and plan for the coming years (2009-2020). It includes an assessment of the current situation, supply and demand, management, monitoring and evaluation, cost of expansion and responsible bodies for implementation, including partners.¹³

The primary objective of the HRH education scaling-up strategy in Ethiopia is to solve the critical shortage of health workers in the sector. Its planning and implementation has been executed by both the Ministry of Education and the Ministry of Health. Most higher education health science graduates have been supplied by the Ministry of Education and absorbed by the Ministry of Health. Therefore, this mutual partnership relies on strong evidence of the yearly health professional demand by the health sector. Having a national comprehensive HRH plan is the only solution to avoid producing beyond demand and absorption capacity and to minimize the loss of a scarce national resource.

The framework of the strategy focuses on identifying and forecasting the HRH requirements of the health sector, resources needed and developing indicators for monitoring and evaluation. Different methods were explored to forecast HRH requirements, and international consultations held during the process. The method adopted in the strategic plan for HRH projection is a variant of the Service Target Approach, which is linked to the health service delivery location. This is a promising model that is considered most appropriate and applicable to the situation in developing countries such as Ethiopia. In this model, anticipated expansion of health facilities, type of health care delivery by level, and population and economic growth, are considered for the estimation of the demand for HRH in Ethiopia.¹³

3.3 HUMAN RESOURCE INFORMATION SYSTEM

Accurate information on the HRH situation in Ethiopia is essential. An important part of this information is the stock, distribution and complete profile of the health workforce in all regions of the country. The lack of information on the health workforce and its actual deployment (i.e. when, how and where) is a major shortcoming in the operation of the HRH system at present. A significant number of existing human resource data systems in the health sector cannot share information with each other because of a lack of standardization, differences in definitions and coding, and because information flows by-pass potential users. Information on staff dynamics and attrition is particularly lacking.

The Ministry of Health is currently using a paper-based Human Resources Information System

(HRIS) that suffers from many of the pitfalls of a paper-based system, causing unnecessary delays to retrieve relevant information. With the aims of reducing the manual workload and modernizing this cumbersome administrative system, the Ministry of Health has been developing an automated HRIS system that provides information to assist timely decision-making at all levels of the health management system. To date, software selection and testing have been carried out with partner assistance. A web-based network will be established at federal, regional, district and health facility management levels throughout the country. The HRIS is expected to be linked with the newly reoriented and reformed Health Management Information System throughout the health-care delivery system. Implementation will start at federal level in the Ministry of Health, then progressively in regions, hospitals and districts until 2010.¹³

3.4 INCENTIVE PACKAGES

Improved human resources management throughout the federal, regional and local levels of the Ethiopian health system will involve recruitment, incentives to retain key health staff, and improved performance of employees in order to reach the health goals. Some evidence suggests that many health sector workers in Ethiopia are not sufficiently motivated to perform well, to work in underserved rural areas, or even to stay in the country.²⁵

Introducing new monetary and non-monetary incentive packages to enhance the public health sector's capacity to attract and retain a health workforce, particularly in rural settings, has to be carefully and strategically designed. The Ministry of Health had developed incentive package guidelines focused on pilot health workers in 2007, which the regional health bureaus implemented based on the local context.²⁶ However, the overall impact of the package has not yet been evaluated. Comprehensive strategies to implement incentive packages will be endorsed in 2009.

Bonding for enforcing compulsory service

The education and training of health professionals demands huge investment. Providing incentives beyond the country's capacity is unrealistic. Therefore, in 2008 Ethiopia developed and implemented a bonding mechanism whereby all health science graduates from public higher education institutions are obliged to serve in the public sector for a period not less than the training period.²⁷

3.5 IN-SERVICE TRAINING, DEVELOPMENT AND CAREER PROGRESSION

In-service training is an important function in the rapid scaling-up of the knowledge and competencies of health professionals. If efficiently linked to pre-service training, it can help to build a sustainable career progression for health professionals and also assist institution building. The human resource management system of the Ministry of Health falls under the Civil Service Commission human resources development policy and strategy. Previous in-service training has not been based on need, and may not be fruitful. The majority of in-service training has been provided by donors and tailored to their objectives rather than the needs of public institutions.

The Ministry of Health of Ethiopia has therefore been standardizing the HRH strategy to be able to identify the in-service training needs and programmes that support the health and management workforce career progression and skills development. The HRH strategy also aims to develop institutional capacity to ensure access to well-planned and quality in-service training and continuing professional development opportunities for all categories of health professionals.

Career progression and in-service training is linked with professional licensing based on a regulatory framework.²⁸

3.6 ESTABLISHING A REGULATORY MECHANISM FOR EDUCATION AND GRADUATES

3.6.1 Institutional licensing

The Ethiopian Government is committed to expanding higher education in the country in order to achieve economic growth and societal development. The production of high-quality, competent and skilled graduates is vital to create the vibrant socioeconomic development of the country. It is with this dedication that the Higher Education Relevance and Quality Agency (HERQA) was established in 2003 to regulate and enhance the quality of higher education provision in all higher education institutions (both public and private) in Ethiopia. The quality assurance of higher education institutions has been executed through HERQA in three phases of evaluation²⁹:

Pre-accreditation: a permit for the institution to start offering certain programmes on the basis of minimum requirements to be fulfilled.

Institutional accreditation: a quality label granted to the institution confirming that it is capable and active in maintaining and improving its own standards through a transparent system of quality assurance.

Programme accreditation: this will be a quality level confirming that the programme offered is in line with its objectives, goals and widely accepted academic standards (*visit www.higher.edu.et for more information*).

3.6.2 Health professionals licensing

The primary purpose of licensure of health professionals is to verify that they meet the basic minimum qualifications and ethical standards to

perform their work safely and effectively. Licensure is mandatory for independent practice in public, private and nongovernmental institutions for all regulated health professionals in Ethiopia.

One of the current governance reform components being undertaken in Ethiopia is health-care delivery regulation. A Health Services and Health Related Products Regulatory Agency will be established from federal through to district level in 2009 with the mandate of regulating health institutions, health professionals, pharmaceuticals, food and food establishments⁷. As at today's date, a comprehensive Health Regulatory law covering this mandate has been formulated and submitted to Parliament for endorsement.

CHAPTER 4

INVESTING IN HEALTH WORKFORCE

SCALING UP IN ETHIOPIA

4.1 GOVERNMENT COMMITMENT

The Government of Ethiopia has been expanding its infrastructure for education. The overall expenditure for the expansion of pre-service education has been covered by the Ministry of Education, and the salaries of health workers in the public sector almost completely disbursed by the Government. This is a promising political commitment for sustainability and ownership in Ethiopia.

The mandate for running all public higher education in Ethiopia is under the Ministry of Education. The majority of regional health bureaus have been training mid-level health-care workers. However, in some regions, this mandate still falls under Regional Education Bureaus. Therefore, health science education is financed and supported by: (a) the Ministry of Education; (b) the Ministry of Health; and (c) health and education partners.

The health sector has been financed and monitored in two ways: through the Ministry of Finance and Economic Development and the Health Sector Development Partners joint forum.

4.2 DONOR LANDSCAPE AND PARTNERSHIP IN HEALTH

The overall investment for the massive scaling up of education requires additional finance to educate and train health professionals in Ethiopia. In the last four years, donor funds have been used for human resource scaling up as well as health systems strengthening.

The Health System Strengthening (HSS) programme has had a great impact on the health system of Ethiopia. The support is channelled through the MDG Performance Package Fund of the Government which was established to move towards broader harmonization and alignment.

The Government of Ethiopia and its development partners signed the International Health Partnership (IHP) Country Compact in August 2008. The Compact is an understanding between the Ethiopian Government and development partners with the main objective to provide a framework for increased and effective aid that would enable Ethiopia to make rapid progress towards achieving the MDGs through the Health

Sector Development Programme². Development partners include: the African Development Bank (ADB), the United Kingdom Department for International Development (DFID), the Embassy of Ireland, the Embassy of the Netherlands, the Embassy of Sweden, the Italian Development Cooperation, the Joint United Nations Programme for HIV/AIDS (UNAIDS), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the United States Agency for International Development (USAID), the World Bank and the World Health Organization (WHO). The Compact provides an overarching framework for health aid coordination in Ethiopia, and complements more specific agreements already in place.

The Ministry of Health has strong national leadership in achieving some degree of harmonization and alignment of external assistance to reduce the transaction costs of planning, procurement, and reporting by integrating vertical programmes within the broader health system.

The concept of the Multi-Donor Trust Fund (MDTF) has been exercised for the last few years in Ethiopia in the name of the “Pool Fund”. It was established as a “basket” for all partners and donors to have one plan, one budget and one monitoring and evaluation procedure throughout the health system. This is considered very useful to work towards a single outcome. Unfortunately, some donors have not been willing to put their money in the established pool fund but they have to harmonize their plan with the national plan to work towards one harmonized outcome.

Both the MDTF and the MDG Performance Package fund are monitored by the Central Joint Steering Committee at monthly intervals. Members of this Committee are representatives of donor agencies; the Committee is chaired by the Ministry of Health and co-chaired by a member nominated by the donor agencies. This has been found a very good way of monitoring the progress of planned activities and finance invested.

Although a significant amount of money has been pledged to the MDG Fund and the MDTF, it is still far from what is needed based on the joint MDG costing. The development partners appraised the Ministry of Health's vision and leadership in the HSDP and its track record for delivering results,

and most are confident that additional resources to the health sector will produce additional results. However, the financial gaps will jeopardize the country's efforts to reach the MDGs. Therefore, it is important for both the partners and the Government to step up their support to the health sector².

The analysis of Government and donors financial contributions to scaling up human resources in Ethiopia has not been clearly carried out in an organized way, and information on the contribution of the private sector should be collected.

CHAPTER 5

ACHIEVEMENT TO DATE, LESSONS LEARNT, AND POLICY RECOMMENDATIONS

5.1 ACHIEVEMENTS TO DATE

The high unmet health-care needs in rural Ethiopia are being addressed through the rapid expansion of PHC services, since the improved physical availability of essential health services will reduce the distance between facilities and users. The following achievements have been made to date towards this goal.

The higher education scaling-up strategy in Ethiopia is not only focused on health but is also multisectoral. Ten years ago there were only five universities in the country but at the end of 2008, 22 universities were functioning well with an additional 10 universities under construction. Ultimately, scaling up the infrastructure will increase the enrolment of health science students many fold. Out of the total 110 000 intake capacity of higher education in 2009, 20% is committed for health sciences education.

Of the 15 000 health posts planned for completion by 2010, 14 445 have already been constructed and equipped to support the provision of preventive and promotive health services to rural populations through the HSEP. In addition to the existing health centres, 2557 new ones are under construction to reach the 3200 blanket coverage in 2010.

The facility expansion calls for significantly more health professionals and supervisory staff. Out of 5000 health officers and 30 000 HEWs to be deployed in 2010, 2586 (52%) and 30 190 (>100%) respectively are already deployed. This infusion of HEWs in the health system has great value beyond health service improvement in creating and securing jobs for citizens, contributing to the reduction of unemployment in the country.

The overall number of health workers increased from 28 320 in 2003 to 62 084 in 2008. The targets for specific health worker to population ratios were 1:2500 for HEWs, 1:12 500 for health officers and 1:5000 for nurses in 2010. By 2008, these ratios had improved to 1:2514 (HEWs), 1:29 354 (health officers) and 1:4073 (nurses), showing that Ethiopia

has already achieved the targeted scale up of nurses and HEWs before planned in 2010.

5.2 LESSONS LEARNT

Reduction of poverty and achievement of the development goals of the country require a much faster implementation and scaling up of development of the health sector. Meeting the MDGs will be impossible unless implementation is accelerated and interventions scaled up.

Every nation has to take extraordinary measures to scale up HRH education to solve the national and international HRH crisis.

It is well understood that the HRH crisis cannot be improved by the Ministry of Health alone, but needs the collaboration and partnership of intergovernmental and development partners, universities and the private sector, collaboration which is well developed in Ethiopia.

Poor countries have limited resources to meet their needs. Ethiopia is one of the countries trying to use the current momentum of international partnership initiative funds to strengthen its health systems on top of government committed funds.

The ability of the government to employ 30 190 HEWs at community level to provide household preventive and promotive health services within a four-year period indicates the political commitment and leadership that ensures strong sustainability of the programme.

If the current momentum of international partnership, political commitment and leadership continues, Ethiopia will have a sufficient number and mix of health professionals who can contribute to achieving universal access and the MDGs by 2015.

This case study ensures that strategic thinking and planning for scaling up HRH in Ethiopia will realize the MDGs and primary health service coverage by the end of 2015.

5.3 POLICY RECOMMENDATIONS

To solve the HRH crisis, countries have to look to tailor their scaling-up mechanism by identifying problems of their specific health professional categories and developing targeted strategies to solve them. Political and leadership commitment from the top to grass-roots level is a key determining factor to realize the scaling-up strategy and plan.

Even if informal community health workers have strong inputs to the health system, they may go unnoticed or unmonitored due to different determining factors. Therefore, having formal community health workers like in Ethiopia will ensure sustainability of the service at community level.

Recruiting health-care workers such as HEWs within their respective residence (region, district, village) has a great impact on reducing attrition and promoting retention in rural areas. It also contributes to making them responsible and respected in their own community. It might also reduce the managerial and administrative time it takes to deploy them.

The huge undertaking of the initiative needs partnerships. International organizations and other

development partners need to be supportive and make funds available in countries that engage in massive scaling up of human resources, which can contribute to tackling the worldwide HRH crisis.

Unfortunately, the migration of skilled human resources is an unavoidable phenomenon because of multiple determining factors. Therefore, a “flooding” strategy is recommended to train thousands of health professionals according to the country-specific context and need.

The following studies are recommended:

- The overall contribution and impact of the infusion of more than 30 000 HEWs into the health delivery system towards improving the quality of life and reducing morbidity and mortality in the mid-term future.
- The impact of the increasing contribution of the private sector in health science education to resolve the HRH crisis.
- An analysis of Government and donor financial contributions to scaling up HRH (pre-service education and in-service training) in Ethiopia, and its impact on the health system.

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Launched in 2006, the **Global Health Workforce Alliance** is a partnership dedicated to identifying and implementing solutions to the health workforce crisis. It brings together a variety of actors, including national governments, civil society, finance institutions, workers, international agencies, academic institutions and professional associations. The Alliance is hosted and administered by the World Health Organization.

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