Success Factors for Women's and Children's Health

ETHIOPIA

Ministry of Health, Ethiopia

The Partnership for Maternal, Newborn & Child Health
World Health Organization
THE WORLD BANK IBRD • IDA | WORLD BANK GROUP
Alliance for Health Policy and Systems Research

"Success factors for women's and children's health: Ethiopia" is a document of the Ministry of Health, Ethiopia. This report is the result of a collaboration between the Ministry of Health and multiple stakeholders in Ethiopia, supported by the Partnership for Maternal, Newborn and Child Health (PMNCH), the World Health Organization, other H4+ and health and development partners who provided input and review.

Success Factors for Women's and Children's Health is a three-year multidisciplinary, multi-country series of studies coordinated by PMNCH, WHO, World Bank and the Alliance for Health Policy and Systems Research, working closely with Ministries of Health, academic institutions and other partners. The objective is to understand how some countries accelerated progress to reduce preventable maternal and child deaths. The Success Factors studies include: statistical and econometric analyses of data from 144 low- and middle-income countries (LMICs) over 20 years; Boolean, qualitative comparative analysis (QCA); a literature review; and country-specific reviews in 10 fast-track countries for MDGs 4 and 5a.[1, 2] For more details see the Success Factors for Women's and Children's health website:
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1. Executive Summary

Overview

Ethiopia has made significant progress towards improving the health of women and children. It is one of 10 high-performing countries that is considered on the fast track in 2013 to achieve Millennium Development Goal (MDG) 4 (to reduce child mortality) and it may also achieve its MDG 5a goal for reducing maternal mortality. This review provided an opportunity for the Ministry of Health in Ethiopia and other stakeholders to synthesize and document how these improvements were made, focusing on policy and programme management best practices.

Under 5 child mortality

Ethiopia achieved an under 5 mortality rate (U5MR) of 88 per 1000 live births (LB) according to the Ethiopia Demographic and Health Survey (EDHS) in 2011, a 47% reduction since 2000, putting it on course to achieve its MDG 4 target of 68. United Nations (UN) interagency modelled data indicate that Ethiopia has already achieved this MDG 4 target. Reductions in child mortality are associated both with improved coverage of effective interventions to prevent or treat the most important causes of child mortality – in particular essential immunizations, malaria prevention and treatment, vitamin A supplementation, birth spacing, early and exclusive breast feeding – and with improvements in socio-economic conditions. Ethiopia has made progress in expanding coverage of key interventions but there is room for improvement.

Maternal mortality

Ethiopia has been making significant progress on reducing maternal mortality, and might achieve its MDG 5a (to reduce maternal mortality) goal of 350 maternal deaths per 100 000 LB according to the 2013 UN estimate.

Health sector

Ethiopia is addressing major challenges in the health sector, including lack of human resources for health (HRH) and low utilization of health services, through its innovative Health Extension Programme (HEP), accelerated midwifery training, Integrated Emergency Surgery and Obstetrics (IESO) task shifting, and scaling up family planning (FP). The HEP trains health extension workers (HEWs) to deliver a basic package of preventive and a few curative health services, including maternal and child health services, in urban, rural and pastoral areas. The HEP has trained and deployed over 38 000 health workers and approximately 16 000 health posts and 3000 health centres have been constructed to increase access to essential services.

Sectors outside of health

Access to safe drinking water and improved sanitation are associated with better health outcomes. Ethiopia appears to be on track to achieve MDG 7c, halving the proportion of the population without sustainable access to safe drinking water and basic sanitation. A number of programmes are in place to improve water and sanitation, including the HEP, where HEWs provide education to communities on safe sanitation practices. Access to primary education, the focus of MDG 2, has improved and the road network has been greatly expanded due to the Universal Rural Road Access Program (URRAP).

Key actors and political economy

Political will and high-level leadership commitment to health and women's and children's health have been key to government health policy over the last 20 years. This is evident through the pro-poor health financing policies adopted, rapid expansion of the health infrastructure, as well as health workforce expansion and adoption of innovative solutions to address the worker shortages. Since 2000, Ethiopia has exhibited leadership and political will by using its available funds (both external donor and national) to strengthen the health system and address system-wide issues despite the global focus on vertical programmes.

Governance and leadership

Government reforms have improved efficiency, collaboration and coordination of the health sector. The Government has committed to a series of governance reforms in its current poverty reduction strategy focused on: civil service and public sector capacity building; financial management; human rights and conflict prevention; democratic representation; access to information; the justice system; decentralization; and civil society participation.

Challenges and future priorities

Despite progress, key challenges which provide the basis for Ethiopia's priorities to accelerate progress towards achieving MDG5 and further improving child survival and development are: low utilization of maternal health services, including skilled attendants at birth; high unmet need for FP; adolescent and youth sexual and reproductive health; awareness of healthy behaviours; cultural barriers; inequities in health service utilization; and quality of care. Priorities include:

1. Increasing skilled attendants at birth;
2. Meeting the unmet need of FP and increasing HRH;
3. Improving quality of care;
4. Increase demand creation for utilization of community-based newborn care and expansion of quality facility newborn care;
5. Increasing resources for health financing; and
6. Increasing focus on research and innovation.

2. Introduction

Ethiopia is one of 10 high-performing countries (which also include Bangladesh, Cambodia, China, Egypt, Lao People's Democratic Republic, Nepal, Peru, Rwanda and Viet Nam) that are considered on the fast track in 2013 to achieve MDGs 4 (to reduce child mortality) and 5a (to reduce maternal mortality).

The primary objective of this document and accompanying review process was to identify factors both within and outside the health sector that have contributed to reductions in maternal and child mortality in Ethiopia – focusing on how improvements were made, and emphasizing policy and programme management best practices and how these were optimized and tailored to Ethiopia's unique context. Methods used for the Success Factors review in Ethiopia included: A literature review based on peer-reviewed and grey literature, policy documents, programme evaluations and sector strategies and plans; A review of quantitative data from population-based surveys, routine data systems, international data-bases and other sources; Interviews and meetings with key stakeholders to inform and help validate findings and to identify factors based on local knowledge and experience; A review of the draft document by stakeholders and local experts to finalize findings.

It was recognized that it can be difficult to establish causal links between policy and programme inputs and health impact. For this reason, plausibility criteria were used to identify key policy and programme inputs and other contributing factors that could be linked to potential mortality reductions. These criteria included, the potential impact of the policy or programme on mortality reduction, that it had been implemented long enough to have influenced mortality, and it had reached a large enough target population to explain national-level reductions in mortality. Following this, stakeholders reviewed the identified policies and programmes to reach consensus on the key inputs that could have likely influenced mortality. Research is needed to better quantify how policies and programmes contribute to improved health outcomes. More data in this area would enable the analysis to be further refined.

The first draft was developed by local and international experts. Interviews and group meetings with stakeholders were conducted between March and April 2014 to further review, revise and achieve consensus on findings. The document was presented to the Directorate of Maternal and Child Health for review and comments. A final draft was developed and approved by the Ministry of Health in March 2015.

3. Country Context

Overview

Ethiopia is a large landlocked country consisting of nine regional states and two city administrations. The terrain is geographically diverse, ranging from mountainous highlands to tropical forests. It is the second most populous country in Sub-Saharan Africa, with a steadily growing population of 85.8 million (2013).[3] It is a mainly rural country with only 17% of the population living in urban areas (see Table 1). Christianity and Islam are the main religions, and there are more than 80 ethnic groups and 90 languages.[4]

In spite of fast growth in recent years, GDP per capita is one of the lowest in the world, with a gross domestic product per capita of $550 (nominal USD) for 2012/2013 or $1109 using purchasing power parity (PPP).[5, 6] Although its gross domestic product grew on average by 9.3% between 2001 and 2011, it has a Human Development Index of 0.396 giving it a rank of 173 out of 187 countries. However, recently the economy has been growing rapidly, at an average of 9.9% per year from 2004/05 to 2011/12 and if it continues at this rate Ethiopia could reach middle income status by 2025.[7, 8] The percentage of Ethiopians living in extreme poverty has decreased from 38.7% in 2004/05 to 29.6% in 2009/10.[7] As the overall Success Factors studies show, improvements in gross domestic product per capita, together with progress across health and other sectors, have contributed to improvements in health and development.[2]

Politically, the government has shown strong leadership to support improvements to the Reproductive, Maternal, Newborn and Child Health (RMNCH) programme, thereby creating an enabling environment to drive change.

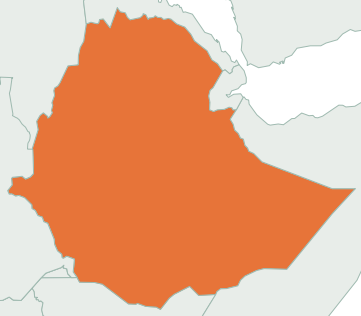


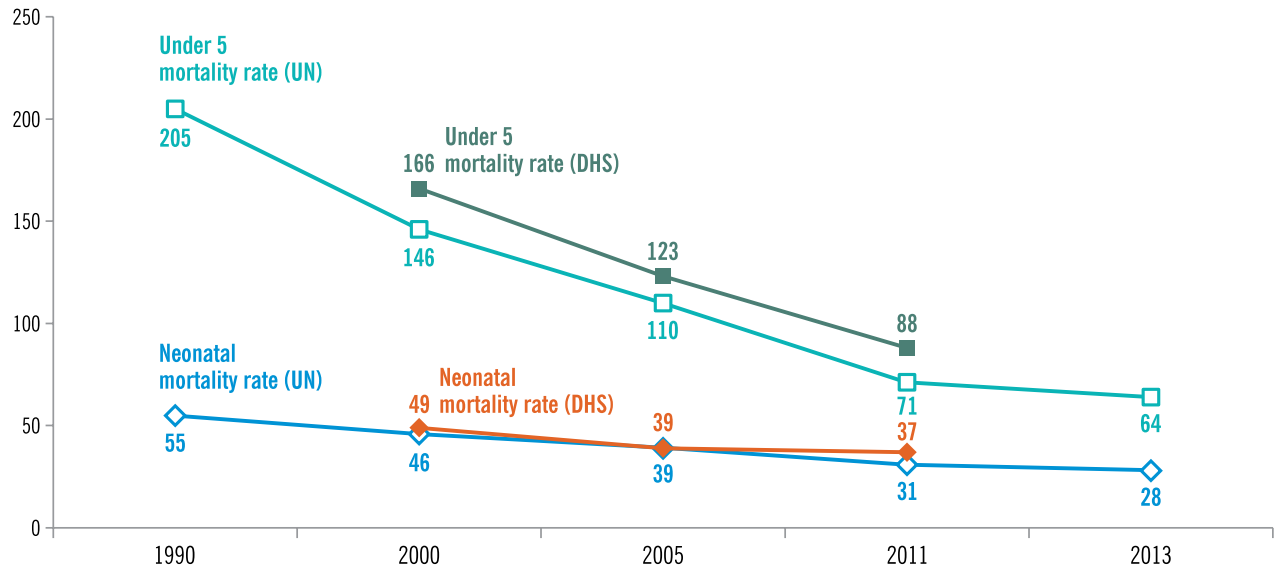
Table 1: Key country indicators*

	INDICATOR	1990-1999	2000-2009	2010-PRESENT
Population	TOTAL POPULATION (millions)	48 (1990)	66 (2000)	84.3 (2012)[3]
	TOTAL FERTILITY (births per woman)	6.4 (1990)[9]	5.5 (2000)[4]	4.1 (2013)[23]
Health Financing	TOTAL HEALTH EXPENDITURE PER CAPITA (PPP, constant 2005 international $)	4 (1995)[10]	5.6 (2000)[11]	20.8 (2011)[12]
	OUT-OF-POCKET HEALTH EXPENDITURE (as % of total expenditure on health)	53 (1995)[12]	36 (2000)[12]	34 (2011)[12]
Economic Development	GROSS DOMESTIC PRODUCT PER CAPITA (PPP, constant 2005 international $)	543 (1990)	519 (2000)	1109 (2012)
	FEMALE PARTICIPATION IN LABOR FORCE (% of females age 15-64)	75 (1990)	76 (2000)	81 (2012)
	GINI INDEX (0 equality to 100 inequality income distribution)	40 (1995)	30 (2000)	34 (2011)
Health Workforce	PHYSICIANS (per 1000 population)	0.03 (1994)	0.02 (2000)	0.04 (2012) (*13*)
	NURSES (per 1000 population)	0.03 (1994)	0.11 (2000)[14]	0.43 (2012)[13]
	MIDWIVES (per 1000 population)		0.01 (2000)	0.05 (2011)
	HEALTH EXTENSION WORKERS (per 1000 population)		0.04 (2004)	0.46 (2012)
Education	GIRLS' PRIMARY SCHOOL NET ENROLLMENT (% of primary school age children)	16 (1994)	42 (2000)[15]	84 (2012)[16]
	ADULT LITERACY RATE (% of males (M) and % females (F) aged 15 and above)	35(M), 17(F) (1996)[17]	40(M), 19(F) (2000)[18]	56(M), 38(F) (2011)[19]
Environmental Management	ACCESS TO CLEAN WATER (% of population with access to improved source)	14 (1990)	29 (2000)	51 (2011)[4]
	ACCESS TO SANITATION FACILITIES (% of population with improved access)	2 (1990)	8 (2000)	15.5 (2011)[4]
Urban Planning/ Rural Infrastructure	POPULATION LIVING IN URBAN AREAS (% of total population)	13 (1990)	15 (2000)	17 (2012)
	ELECTRIC POWER CONSUMPTION (kilowatt hours per capita)	23 (1990)	23 (2000)	52 (2011)
Human Development Index (Composite of life expectancy, literacy, education, standards of living, quality of life)	VALUE (reported along a scale of 0 to 1; values nearer to 1 correspond to higher human development)	N/A	.28 (2000)	.40 (2012)
	COUNTRY RANK (2012)		173 (2012)	
Good Governance (Reported along a scale of -2.5 to 2.5; higher values correspond to good governance)	CONTROL OF CORRUPTION (extent that public power is used for private gain)	-1.15 (1996)	-0.49 (2000)	-0.60 (2012)

*See Table 2 for data on coverage of key RMNCH indicators

Unless referenced otherwise, source: World Development Indicators, UNDP, World Bank (Worldwide Governance Indicators)

Figure 1: Under 5 mortality and neonatal mortality rates, 1990-2013



Source (DHS): Ethiopia Demographic and Health Surveys, 2000, 2005, 2011, 2014.
Source (UN): Estimates developed by the UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at www.childmortality.org

Timeline with key policy inputs

1991-2000	2001-2013
1993 Health Policy, National Population Policy, Women's Policy, National policy on disaster prevention & management	**2002/03-2004/05** HSDP II
1994 Education & Training Policy	**2002** Food Security Project; Sustainable Development and Poverty Reduction Programme
1997/98 to 2001/02 Health Sector Development Program I (HSDPI) (prioritizes RMNCH)	**2003** Government Food Security Program; Rural Development Policy & Strategies, National Water Supply & Sanitation Master Plan
1998 HIV/AIDS policy	**2004** Enhanced Outreach for Child Survival; HEP; Water Supply, Sanitation and Hygiene Programme; Safe Motherhood Strategy 2005/06-2010/11; HSDP III
2000 Treatment of severe acute malnutrition; Making Pregnancy Safer; Tetanus elimination campaign	**2005** Abortion Technical Guideline; National Strategy for Child Survival; HSDP III; A Plan for Accelerated and Sustained Development to End Poverty; 2005 Child survival Strategy
2000 National Water Policy	**2006** Reproductive Health Strategy; National Hygiene & Sanitation Strategy
	2007 Adolescent and youth reproductive health strategy
	2008 National and community-based nutrition programme; Integrated Emergency Obstetrics Surgery and Accelerated Midwifery Programmes
	2010/11-2013 HSDP IV; PMTCT/HIV Strategy, Malaria Strategy, EPI Strategy, National Nutrition Strategy and Stunting Reduction Strategy, and Infant and Yong Child Feeding (IYCF) Strategy; Integrated Management of Neonatal and Childhood Illness (IMNCI); Integrated Community Case Management (ICCM); Community Based Neonatal Care (CBNC); Newborn corner initiative; Neonatal Intensive Care Unit (NICU); paediatric referral care; Accelerated plan for scale up of Prevention of Mother-to-Child Transmission of HIV (PMTCT) and paediatric ART; Policy Guideline for Family Planning; Services Revised NNP
	2012 National Road Map for Accelerating Reduction of Maternal and Neonatal Mortality and Morbidity

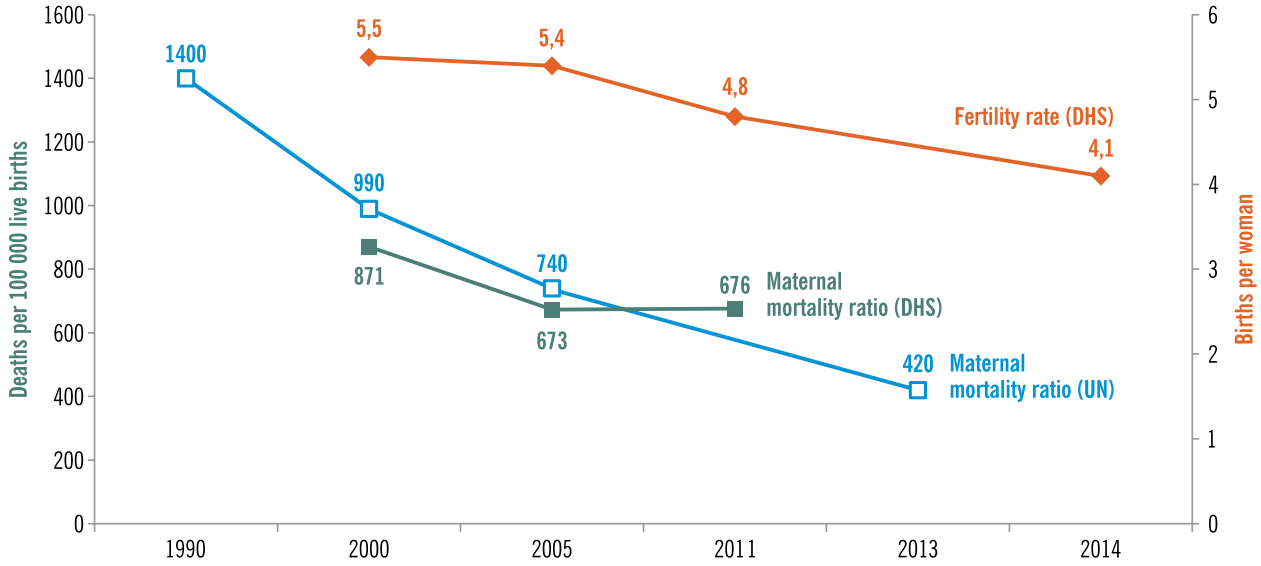
4. Key Trends, Timelines and Challenges

Ethiopia has achieved its MDG 4 target (to reduce child mortality) according to the UN Interagency Group for Child Mortality Estimation modelled data, which indicate that Ethiopia reduced its U5MR to 64/1000 LB in 2013, a 69% reduction since 1990.[20] The 2011 EDHS data reported a U5MR of 88/1000 LB.[4] Major efforts to expand and improve maternal health services have also put Ethiopia on the fast track to achieve its MDG 5a goal (350/100 000 LB) for reduction in maternal mortality. WHO modelled data for 2013 revealed a maternal mortality rate (MMR) of 420/100 000 LB for Ethiopia with a goal of 350 in 2015.[4, 21, 22] However, according to the EDHS 2011, the country continues to experience one of the highest maternal mortality ratios in Africa at 676 per 100 000 live births.[4] (see Figure 2)[a]

Several factors across multiple sectors have played a key role in driving the progress in child health. Reductions in child mortality are associated both with improved coverage of effective interventions to prevent or treat the most important causes of child mortality – in particular essential immunizations, malaria prevention and treatment, vitamin A supplementation, birth spacing, early and exclusive breast feeding – and with improvements in socio-economic conditions.

Although Ethiopia has made progress in expanding coverage of key child health interventions there is still room for improvement. Ethiopia faces a range of challenges, common to many high-performing countries, which have hindered progress towards MDG goals. Its low utilization of RMNCH health services - by 2014, 16% of births were being attended by a skilled birth provider (see Table 2)[23] and unmet need for family planning (FP) stood at 18.8% – is the result, at least in part, of enduring sociocultural and gender barriers.[24] Women's social status is often low and the quality of care, particularly culturally sensitive care, can be poor.[25] However, geographical barriers which have historically restricted access especially for rural communities have been widely addressed by an expanded road network and improved health infrastructure.[25]

Figure 2: Maternal mortality ratio and fertility rate, 1990-2014



Source (DHS): Ethiopia Demographic and Health Surveys, 2000, 2005, 2011, 2014.
Source (UN): WHO, UNICEF, UNFPA, The World Bank, and the United Nations Population Division. Trends in Maternal Mortality: 1990 to 2013. Geneva, World Health Organization, 2014.

a. "Ethiopia has one of the highest rates of maternal mortality in Africa. Progress on reducing maternal mortality has stalled since 2005 when the country managed to reduce maternal mortality rate (MMR) to 676 per 100 000 births in 2010/11 from 871 in 2000/01. This means that with the MDG target of 267 per 100 000 births by 2015, the country is clearly off-track on goal five."[22]

Ethiopia continues to face a shortage of some types of health workers although it has been aggressively addressing this problem with a range of task shifting and innovative approaches. The current health workforce consists of 0.04 doctors, 0.43 nurses and 0.05 midwives per 1000 population, also represented as one doctor for 26 943 people; one nurse for 2311 people; one midwife for 21 810 people.[26] Adequate numbers of low- and mid-level personnel are available to staff primary health care facilities. For instance, the WHO standard of one nurse per 5000 population has been surpassed since the current ratio for nurses is 1:2311 population. Five thousand health officers have been trained and deployed, and first degree graduates in laboratory technology, pharmacy, environmental health and nursing have been trained in sufficient numbers for the absorption capacity of public sector health facilities. However, there is still an acute shortage of physicians, midwives and anaesthesia nurses. The Federal Ministry of Health (FMOH) has increased the intake and number of medical schools, and held successive consultations with new graduates in an effort to address the shortage. Ethiopia now has 27 medical schools and 45 health science colleges.

Table 2: Key RMNCH coverage indicators

CONTINUUM OF CARE STAGE	INDICATOR	2000	2010 TO PRESENT	SOURCE
Prepregnancy	DEMAND FOR FAMILY PLANNING SATISFIED (% of women age 15-49 with met need for family planning)	18.4	53	EDHS 2000 EDHS 2011
Pregnancy to postnatal	ANTENATAL CARE (% of women attended at least four times during pregnancy by any provider)	10.4	32	EDHS 2000 EMDHS 2014
	SKILLED ATTENDANCE AT BIRTH (as % of total births)	5.6	16	EDHS 2000 EMDHS 2014
	ANTIRETROVIRALS FOR WOMEN (HIV-Positive pregnant women receiving antiretrovirals to reduce mother-to-child transmission)		55	UNAIDS, Report on the Global AIDS Epidemic, 2012, published via AIDSinfo[27]
	POSTNATAL CARE FOR MOTHERS (% of mothers who received care within two days of childbirth)	2.4	13	EDHS 2000 EMDHS 2014
Newborn and childhood	INFANT FEEDING (Exclusive breastfeeding for first six months)	38.1	52	EDHS 2000 EDHS 2011
	IMMUNIZATION (Children ages 12-23 months receiving DTP3, adjusted DPT-HepB-Hib3)	66 (2006)	65.7 (2012)	Ethiopia National Immunization Coverage Survey 2006[28] & 2012[29]
	PNEUMONIA (Antibiotic treatment for pneumonia)	4.9 (2005)	7	EDHS 2005 EDHS 2011

EDHS: Ethiopia Demographic and Health Survey; EMDHS: Ethiopia Mini Demographic and Health Survey.

5. Health Sector Initiatives and Investments

National prioritization of and commitment to women's and children's health

Since 1990, government health expenditure as a proportion of total government expenditure has increased in Ethiopia. Absolute government expenditure on health has risen dramatically in the last decade, from US$ 5.6 per capita in 2000 to US$ 20.77 per capita in 2010.[12] Ethiopia was also the fourth largest recipient of official humanitarian aid in 2010, receiving US$ 3.5 billion in total aid which is US$36 per capita.[30] According to the Health Sector Annual Performance Report, October 2013, the percentage of total budget allocated to the health sector at regional level was 9.75% in 2012 which was higher than the previous year (9.13%).[31] The fifth-round National Health Account (NHA) revealed that national health expenditure increased substantially (290%) between 2004/05 and 2010/11 in both absolute and per capita terms.[12] Per capita national health expenditure almost tripled from US$ 7.14 per capita per annum in 2004/05 to US$ 20.77 in 2010/11 but this is still far short of the US$ 34 recommended by WHO in 2001 or the 2015 target of US$ 60 per capita.[12] Current spending is not adequate to buy good health for all Ethiopians.

The 2007/08 National Health Accounts found that government spending on health was 4.5% of gross domestic product, nearly meeting the World Health Organization (WHO) recommendation that countries should spend 5% of gross domestic product on health.[32] In the last two decades, the Ethiopian government introduced a wide-ranging health care financing reform initiative which provided for fee waivers for maternal and child health services and poor citizens. Operational and legal frameworks are being set up to introduce community-based and social health insurance schemes. The government also is pursuing a strong resource mobilization strategy that is enabling the country to secure an unprecedented amount of resources from donors.

National focus on sectoral alignment and coordination of all partners

Ethiopia has adopted a sector-wide approach to improve aid effectiveness and facilitate greater linkages with government health priorities and plans. One strategy used to streamline these resources is the MDG Performance Fund, a government-managed fund, through which all available funding for health activities (government and donor sources) is combined. A national Joint Consultative Forum led by the Minister of Health and heads of agencies decides how to allocate financial resources.

An agreement between the Federal Ministry of Health (FMOH) and its major health development partners was signed in 2005 to guide the conduct of all partners in support of the Health Sector Development Programme (HSDP), followed by International Health Partnership+ (IHP+) agreements and a Joint Financing Agreement (JFA). The focus of these agreements is on ensuring one plan, one budget and one report at all levels of the health system. The H4+ group, comprising WHO, the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), UN Women, the World Bank and UNAIDS, has been functional over the past five years, working jointly to aid harmonization and avoid duplication among the H4+ agencies through Joint Programming under the United Nations Development Assistance Framework.

Outcomes monitored using evidence

The establishment of a functional health management information system (HMIS) is currently underway following the formation of an HMIS national advisory committee during HSDP II (2000/01–2005/06). The civil registration system (registration is done by HEWs) in Ethiopia currently records only 7% of births.[33] Thus, Ethiopia has relied to a large extent for health outcome measurement on the series of Demographic and Health Surveys (DHSs), conducted in 2000, 2006 and 2011, and these have been instrumental in highlighting RMNCH as a political priority.

Emergency Obstetric and Newborn Care Surveys have also been used in Ethiopia to influence RMNCH policy. Ethiopia conducted its first such survey in 2008/09, which was important in determining the number of new facilities required to meet the identified need. Two other means of measuring outcomes to inform decision-making have been employed. In 2011, the Government developed score cards based on HMIS data to promote accountability, facilitate use of local data for monitoring and decision-making, track progress, respond to service gaps and inform action. Eighteen indicators, including deliveries by a skilled birth attendant, low birth weight and mortality rates, are tracked for each region in the country and updated quarterly showing performance by region against national and international targets. These are reviewed at a National Review Meeting and Joint Steering Committee meetings with the regions to prioritize resources and inform action.

Political prioritization of essential health interventions

Since its launch in 1997/98, Ethiopia's Health Sector Development Plan (HSDP), now in its fourth round, has prioritized RMNCH through improvement of the quality and access to services for all segments of the population. As part of targeted strategies to reduce child morbidity and mortality, the HSDP initiated several activities focused on: strengthening routine immunization; expanding community services and facility-based integrated management of neonatal and childhood illness; successful scaling-up of the integrated community case management of childhood illness; prevention of mother-to-child transmission of HIV/AIDS and other HIV and tuberculosis interventions; strengthened referral system incorporating an ambulance service; strengthening the HEP including community-based nutrition and community-based management of acute malnutrition; and implementing locally relevant and effective child health interventions including bed net use.

Routine vaccination coverage among children aged 12–23 months has increased markedly over the past 10 years to 80% in 2012 (see Table 2). This improvement is cited as a key factor in the decline in under 5 mortality.[33] The annual average number of malaria cases has fallen from 3 million between 2000 and 2005 to an average of 1.7 million in 2009.[25]

Recognizing the challenge of reducing newborn mortality, newborn corners have been introduced to 1700 health centers and 55 hospitals and newborn intensive care units have been introduced in 80 hospitals.

Focus on addressing health workforce shortages

Ethiopia has worked to increase and equitably distribute and deploy its health workforce. The Health Extension Programme is an innovative health service delivery programme that aims for universal coverage of primary health care services (see Health sector spotlight). The programme facilitates access to basic preventive and curative health services in rural, urban and pastoralist areas through the expansion of physical health infrastructure and increasing the number of HEWs. This new cadre of health workers forms a key component in the government's plan to increase access to basic obstetric and neonatal care, improve nutritional status of women and children, and improve knowledge and behaviours around clean water and sanitation.

The number of medical schools increased from six to 24 between the late 1990's to 2013. The expansion of medical education was developed under the New Medical Education Initiative and uses a new modular curriculum. According to the recent Health Sector Annual Performance Report, October 2013, 11 291 medical students were in training in 24 medical schools across the country; 38 780 HEWs are trained and deployed (34 380 rural and 3400 urban HEW); and 3190 midwifery students have graduated since the start of accelerated midwifery training in 2008.[31] It is expected that the target for the number of midwives per expected birth will likely be achieved when the current 1190 midwifery students in preservice training graduate. One hundred and thirty six Non Physician Clinicians (also known as Integrated Emergency Surgical Officers (IESO) are trained and deployed so far and 462 are currently being trained.[34] The target for IESO of 800 will likely be met in the next three years fully covering the primary hospitals' human resource requirements for Emergency Obstetric and Newborn Care services.

Legal and financial entitlements, especially for underserved populations

As part of the HSDP, efforts have been made to train health workers as mentioned above and build facilities in underserved rural areas. By 2011, the numbers of facilities constructed, upgraded and equipped had reached 16 048 health posts, 3245 health centres and 122 public hospitals.[13] The Ministry of Health is providing special support for the four developing regional states and has established a Pastoralist Directorate at the federal level to coordinate this support. In addition, the Food, Medicine and Health Care Administration and Control Authority was set up in 2009 to license drugs, license health professionals and define standards for both private and public health facilities, demonstrating the country's commitment to setting national standards and improving the quality of care provided in Ethiopia.

A Health Development Army (HDA) was established in 2010 with the aim of expanding the achievements of the HEP deeper into communities, improving community ownership and scaling up best practices.[35] The HDA has a variety of roles, include discussing birth preparedness and working with HEWs to disseminate pregnancy-related information.

Legal measures undertaken to improve women's access to reproductive health care services include the revision of the national penal code (2005), the revision of family law, the development of the national technical and procedural guideline for safe abortion (2006) and the regulation on health care (Regulation 299/2013). These provisions have expanded the circumstances in which women can legally seek an abortion. Since these adaptations, evidence suggests a decreasing trend in mortality associated with abortion.[36] In 2010, however, legal, safe abortions performed in a health facility, still constituted only 27% of all terminations in Ethiopia.[37]

Additionally, legislation enabling free maternal and newborn services in public health facilities is another example of legislation to improve access to care.

There are best practices in the Region; developing individual and team-level plans and regular evaluation as best practice, (reversing) the preference of home delivery, networking and solving economic problems.

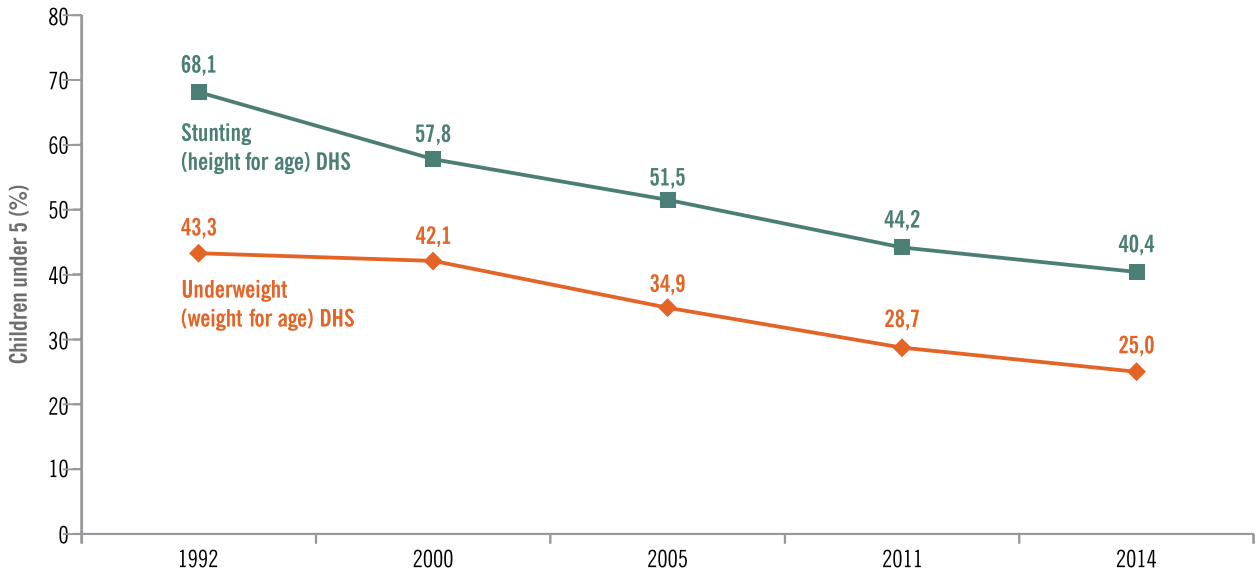
Tigray Regional Health Bureau Annual Report 2005 (Ethiopian calendar)[39]

National focus and leadership to address malnutrition

Ethiopia is on track to achieve its MDG 1c to halve malnutrition. It has tackled malnutrition, an underlying cause of child mortality, through multisectoral national planning. In 2008, the Government launched the National Nutrition Programme (NNP), moving away from an earlier focus on food aid to provision of comprehensive nutrition services in a single strategy. The NNP was revised in 2013 and jointly launched by nine ministries, underscoring the importance of multisectoral efforts to address under-nutrition.[38] The NNP is aligned with the government's social protection strategies, including the Food Security Strategy, which includes the Productive Safety Net Programme. Initiated in 2005, the Productive Safety Net Programme either hires people for public works or provides families with cash transfers or food to increase food security. Other key social protection strategies include a safety net programme targeting people in the poorest areas of the country, an emergency and response system targeted at people who are not served by the safety net programme, expansion of community nutrition programmes, micronutrient supplementation, treatment of severe acute malnutrition and a package of free health services, including family planning, pneumonia treatment, distribution of insecticide-treated bed nets and treatment of acute diarrhoea.

The Community-based Nutrition Programme is a key component of the NNP, and is delivered by HEWs. This programme aims to improve the nutritional status of children under the age of 2, strengthen communities' ability to identify undernutrition, equip communities with the knowledge to identify causes of undernutrition, and improve the use of family, community and external resources. In the five years since its inception, the programme has expanded from 39 to 228 districts; by 2012, 71% of children aged 6–59 months were being provided with vitamin A supplements and 52% of children aged 0–5 months were being exclusively breastfed. There has been a downward trend in the proportion of children stunted and underweight in recent years. Stunting prevalence decreased from 58% to 51% between 2000 and 2005 and fell to 40% between 2005 and 2014.[23] A similar pattern is also observed for the proportion of children underweight[4] (see Figure 3).

Figure 3: Stunting and underweight of children under 5



Source: Ethiopia Demographic and Health Surveys, 2000, 2005, 2011, 2014.

Health sector spotlight

THE HEALTH EXTENSION PROGRAMME

In 2004, the HEP was developed by the Ethiopian Government with support from development partners as a key strategy to achieve its health related MDGs and increase access to and utilization of primary care by promoting community-based maternal and child health (MCH) services. The HEP is implemented by salaried health extension workers (HEWs), a new type of community-based health worker, who are selected from the community in which they live. HEWs are all female (except in pastoralist areas), to balance gender in the workforce and ensure cultural sensitivity, as HEWs often conduct home visits to provide services to mothers and children. HEWs provide 17 health packages that target the major disease burden in the population, focusing on four areas: maternal, child and newborn health; disease prevention and control; personal and environmental hygiene and sanitation; and education.

Since its initiation in 2004, the HEP has had a positive impact on human resources for health, access to health services, and improved sanitation in rural areas. The health workforce has doubled since the programme's inception: more than 16 000 health posts have been constructed, with more than 38 700 HEWs deployed throughout the country. Coverage of primary health services has increased in rural communities, resulting in increased levels of RMNCH care. The percentage of women making four or more antenatal visits tripled between 2000 and 2014; contraceptive coverage for modern methods grew nearly sevenfold from 6% to 40% over the same period.[40] The U5MR declined from 123 deaths/1000 live births in 2005 to 88/1000 live births in 2011, an average annual rate of decline of 5.4%. Access to latrines in the country has also increased, from 7.4% in 2005 to 15.5% in 2010.[4, 41] The FMOH Health Management Information System Report for 2012 puts the figure for national latrine coverage at 86% while also acknowledging large variations between regions.[31]

Several factors have contributed to the effectiveness of the HEP: multisectoral collaboration, attention to local contexts, strong ownership and leadership by government and local communities, strong partnerships and greater investment in health, capacity building and system-wide support.[42, 43, 44]

6. Initiatives and Investments Outside the Health Sector

Education

A commitment to establishing and meeting national and international targets, including the MDGs for universal education and gender equality, has led to improvements in education in Ethiopia. Ethiopia has passed legislation and established national programmes to introduce universal and free education. Ten years of effective programmes and policies promoting education have seen improved access to and a reduction in the gender gap for schooling. The Education Sector Development Programme was initiated in 1998 with the aim of providing universal education by 2015. The programme covers education from basic to tertiary level, including: building, upgrading and renovating schools; reforming curricula; improving teachers' skills; and increasing the provision of equipment and books.

Total primary enrolment has nearly doubled, from 8.1 million children attending primary school in 2001–2002 to 17 million in 2011–2012. The ratio of girls to boys in primary grades 1–4 increased from 0.74 in 2001–2002 to 0.90 in 2011–2012, and from 0.58 to 0.96 in grades 5–8. The overall ratio of girls to boys enrolled in school increased from 0.65 in 2000 to 0.91 in 2012. The overall enrolment rate for secondary school stood at 36.9% in 2011–2012, about double the level in 2001–2002.[26] Ethiopia will reach universal completion of primary education and is on track to achieve a 100% literacy rate among 15–24-year-olds.

The expansion of general education has occurred at the same time as a major expansion of both technical and vocational education and higher education sub-sectors, which showed an annual average increment of 21.8% and 18.1% respectively between 2006–2007 and 2010–2011.

Innovation and research

Ethiopia designed an innovative policy and strategy to employ community health workers to help respond to the human resources gap. The HEP and the HEWs (see Health sector spotlight) are an example of an innovative cross-cutting intervention. The HEWs have a direct and positive impact on health and are also bringing benefits in the areas of nutrition and water and sanitation, as mentioned above.

Another innovation in human resources is the recent development of a cadre of mid-level health professionals called Emergency Surgical Officers. Five Ethiopian universities run the three-year Master of Science (MSc) programme to train Emergency Surgical Officers. This programme is being extended to five further training institutions. Emergency Surgical Officers facilitate task-shifting and are a key component of the plan to increase the number of functional comprehensive emergency obstetric and newborn care facilities. The first graduates completed their training in 2012 and have been deployed alongside teams of midwives and anaesthetists to more remote areas. Another recently initiated programme accelerates midwifery training to rapidly expand the number of midwives in the country.

Infrastructure, water supply and sanitation

Ethiopia is on track to reach the MDG target of halving the population without access to clean water by 2015. In recent years a number of programmes have supported access to safe water and sanitation services and better management of water resources. The proportion of Ethiopia's population with access to safe drinking water increased from 14% in 1990 to 51% in 2011 (see Table 1).[4, 26]

Ethiopia's development was historically hindered by a significant infrastructure gap: it had one of the lowest road densities in Africa. However, Ethiopia's roads programme has succeeded in increasing both the length and quality of the road network, from under 20 000 km in 1991 to over 63 000 km in 2012.[33] The road network has also shown an average annual growth rate of 9.35% between 1991 and 2009.[45]

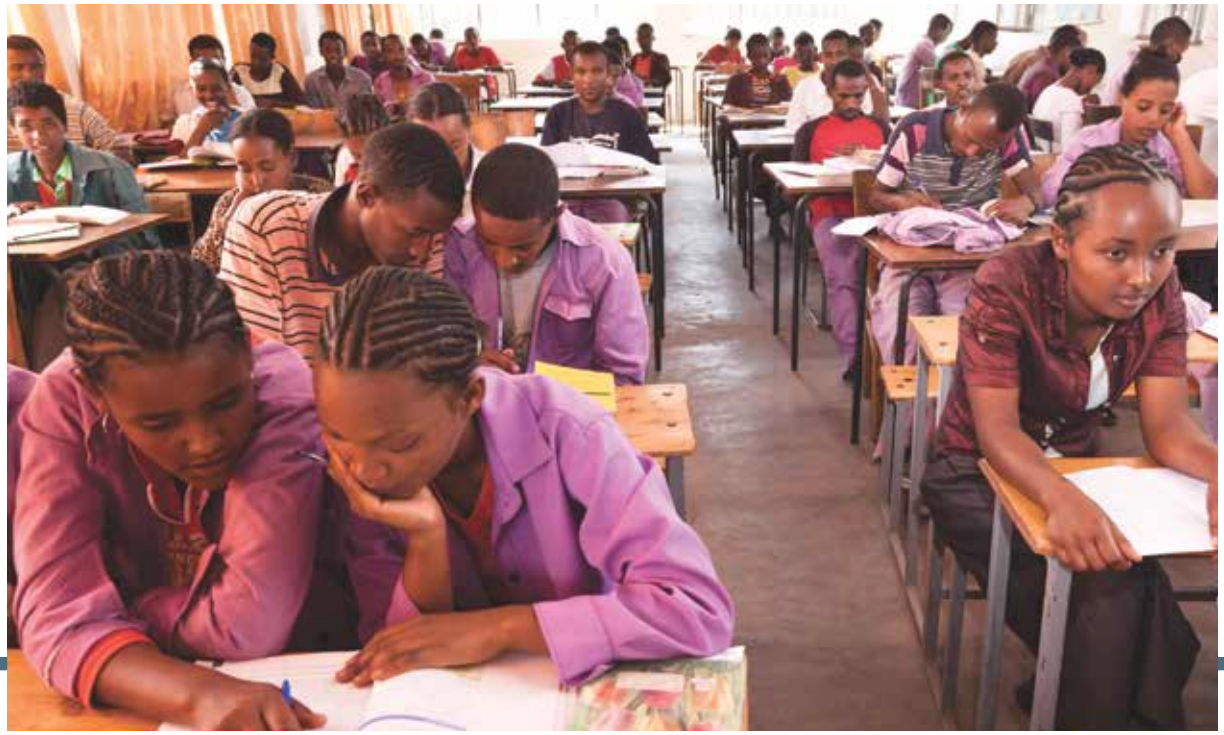
Spotlight of a sector outside of health

Ethiopia has seen unprecedented expansion of its education system. Approximately 3 million pupils were in primary school in 1994/95; by 2008/09, primary enrolment had risen to 15.5 million – an increase of over 500%. Secondary school enrolment also grew more than fivefold during this period. In 1992, around four of five primary school-aged children were out of school. In 2008, it was only one in five (20%).

Improvements in access to education have helped narrow the gender gap and have benefited the poorest. Traditionally, boys were more likely to attend school and less likely to drop out: in 1994/95, boys' gross enrolment ratio (GER) was more than 50% higher than girls' (31.7% and 20.4%, respectively). Since then, a number of initiatives have been implemented: encouraging women's employment in the civil service, promoting gender-sensitive teaching methods and increasing the minimum marriage age to 18. In 2008/09, almost full gender parity was achieved: the GER was 90.7% for girls and 96.7% for boys.

Many factors have contributed to the achievement of the above result, of which the following are recognized as important: sustained government commitment; increased autonomy of regional and local government by devolution of power and service delivery to local governments; increased community participation witnessed by effective parent-teacher associations; and establishment of an effective development partnership between government and development partners. The government's commitment to education is evidenced by prioritizing its spending on education. Public spending on education, which during the 1980s remained under 10% of total spending, had increased to 23.6% of total expenditure by 2008/09. Ethiopia has also endorsed pro-poor education policies such as abolition of school fees for primary and lower secondary schools; alternative basic education for out-of-school children in remote areas; adult literacy programs; and school feeding programs.

Ethiopia's progress in education demonstrates that a sustained government-led effort to reduce poverty and expand the public education system equitably, backed by sufficient resources and improved service delivery, can dramatically increase school enrolment. However, improving educational quality remains one of the most significant challenges in improving learning outcomes in Ethiopia.[46]



7. Key Actors and Political Economy

Political will and high level leadership commitment to health and women's and children's health have been key to government health policy over the last 20 years.[47] This is evident through the pro-poor health financing policies adopted, rapid expansion of the health infrastructure, as well as health workforce expansion and adoption of innovative solutions to address the worker shortages. Since 2000, Ethiopia has exhibited leadership and political will by using its available funds (both external donor and national) to strengthen the whole health system and address system-wide issues despite the global focus on vertical programmes.

The 1993 Ethiopian Health Policy focused on decentralization and democratization of the health service in the country. Decentralization results in services provided closer to communities and gives management responsibility to the community. Currently almost all villages (known as *Kebele*) of the country have a health post managed by the village administration and the Health Extension Workers and almost all districts have more than one health centre. Districts (*Woredas*) are responsible for allocating the budget to different services including health and education and to manage the health facilities in the district. Elected council members supervise health services in their districts. Districts are supported and supervised technically by the Regional Health Bureaus (RHBs), which are supported by the Federal Ministry of Health.

The government has also led by creating a Joint Core Coordination Committee (JCCC) which is a technical committee chaired by the State Minister. It meets every two months to coordinate and align plans and implementation with government priorities. The JCCC has played a critical role in organizing annual planning processes; HSDP mid-term reviews and evaluations; overseeing pooled funds; coordinating and managing preparation for the Joint Review Missions (JRMs) and Annual Review Meetings (ARMs); and reviewing draft reports before their submission to the Joint Coordination Forum (JCF).

The JCF is a high-level quarterly meeting between the Minister and development partners' representatives to further coordinate and align priorities and supervise the JCCC. National Technical Working Groups in a number of technical areas also provide a platform for joint priority setting, problem solving, and drafting guidelines and monitoring tools.

The FMOH has strong working relationships and collaboration with professional societies working on health such as the Ethiopian Public Health Association, the Ethiopian Medical Association, and the Ethiopian Society of Gynaecologists and Obstetricians. Ethiopia endorsed an anticorruption proclamation in 2001 and since then institutionalized the fight against corruption through creating a federal institution, the Federal Ethics and Anti-corruption Commission of Ethiopia.

Dr. Tedros Adhanom Ghebreyesus, former Minister of Health from 2005-2012, has stood out as a champion for women's and children's health in Ethiopia having received several international awards for his work in global health.[b] He has received praise for a number of system-wide health reforms that substantially improved access to health services and key outcomes including the HEP, malaria control activities, reducing under 5 mortality from 123 deaths per 1000 live births in 2005 to 88 in 2011, and increasing the hiring of midwives.

b. In 2011 Dr. Tedros was the first non-American recipient of the Jimmy and Rosalynn Carter Humanitarian Award. This is an award conferred by the US National Foundation of Infectious Diseases to recognize individuals who have made significant contributions to improving the health of humankind. In March 2012 he received the 2012 Honorary Fellowship from the London School of Hygiene and Tropical Medicine, the highest honour bestowed by the School and goes to those who have achieved exceptional distinction in international health or Tropical medicine.

8. Governance and Leadership

According to the World Governance Indicators, government effectiveness and control of corruption in Ethiopia improved significantly in the period from 1996 to 2011. Government reforms have improved efficiency, collaboration and coordination of the health sector. After dialogue within the country and with development partners, including the World Bank, the Government committed to a series of governance reforms in its current poverty reduction strategy. These reforms are focused on: civil service and public sector capacity-building; financial management; human rights and conflict prevention; democratic representation; access to information; the justice system; decentralization; and civil society participation.[48]

In 2011, 15 hospitals with strong leadership qualities were identified across Ethiopia and designated as lead hospitals. Part of their role is to support neighbouring hospitals to improve their services and set up improved management structures which also include community members. Facilities selected as lead hospitals receive a financial award.

Ethiopia has been recognized for its innovative HEP. In 2011, policymakers, medical practitioners and public health professionals from seven African countries participated in a field observation of the programme, so that participants could learn from the programme and determine how to apply lessons learned to their own countries.[49] Ethiopia's Minister of Health, Dr. Tedros Adhanom was awarded the Stanley T Woodward Lectureship at Yale University in recognition of his contribution to working towards universal access to health services in Ethiopia through the HEP.[50]

9. Lessons Learned and Future Priorities

The vision of the FMOH is to create a system that will ensure quality health services which are equitable, sustainable, adaptive and efficient to meet the health needs of a changing population between now and 2035. The MDGs remain the main focus for the health sector; concerted efforts are needed to improve maternal survival and maintain the downward trend in child mortality. The priorities include:

Health workforce: Ethiopia requires continuing investment in expanding the skill base, size and equitable distribution of the health workforce, particularly midwives. Increasing the numbers of midwives, doctors and Integrated Surgical Officers is essential. The Government has already made strengthening the health system and training of health workers a priority (see health sector section of this document) through the Investing in Midwifery Programme; training of HEWs to provide long term FP service at community level and other services; training of Non-Physician Clinicians, also known as Integrated Surgical Officers who are mid-level health workers to perform lifesaving emergency obstetrics and surgery.

Improving the quality of midwifery education, increasing the capacity of the workforce and addressing retention/recruitment issues are part of this challenge. Addressing the low levels of skilled birth attendants and access to contraceptives are clear priorities for reducing maternal mortality.

Data available in 2014 show an increase in births assisted by a skilled provider to 16%;[23] although this represents an increase from earlier findings, it remains low.[4] This is compounded by the inequities between different population groups: for example, while skilled providers attended 59% of births in urban areas, only 10% of rural births were similarly attended.[23] The contraceptive prevalence rate (CPR) has more than doubled over a recent five year period to 42% and there is a positive trend from the use of short-term family planning methods to longer-term methods.[23] However, the unmet need for family planning remains high at 25% and will need to be addressed in the future.

Quality of care: Improving the quality of RMNCH care is a priority and one shared by many high-performing countries. The maternal death surveillance and review process is a key part of Ethiopia's strategy to address this issue. Maternal death reviews are often implemented to understand causes of deaths and to inform health sector planning and policy decisions. A new maternal death surveillance and review (MDSR) system is being rolled out by the FMOH in seven regions with the aim of recording, reviewing and responding to every maternal death. Supported by National Guidelines launched in May 2013, training is currently in progress and it is expected that data will start to flow by the end of 2013. A pediatric quality of care improvement initiative being implemented since 2012 and currently expanded to 40 hospitals.

Newborn health: Neonatal mortality has shown less improvement than under 5 mortality; however, further efforts to eliminate maternal and neonatal tetanus may have an impact. Community-based newborn care was launched in 2012 following Save the Children's Community-based Interventions for Newborns in Ethiopia (COMBINE) trial. It provides a package of community-based interventions in the HEP, which include promotion of antenatal care (ANC), clean and safe delivery, postnatal follow-up of mother and baby, and management of neonatal sepsis by HEWs when referral is not possible. The program is being rapidly scaled up and by the end of 2014 about 102 woredas and 2,445 HPs were covered. Similarly, initiatives to improve newborn care in health centres and hospitals are ongoing resulting in the establishment of 850 newborn corners in health centers and 30 Neonatal Intensive Care Units in hospitals.

Financing health services: Ethiopia needs to reduce out-of-pocket expenditure and increase its public health financing if it is to ensure universal health care coverage, which is one of its goals. Emphasis will be required on emerging areas of the country as well as on equity. Ethiopia only spends US$ 20.77 per person on health, which is far below WHO's recommendation of US$ 34 and goal of US$ 60 for 2015.[51] Finding ways to increase the amount of national spending is a priority.

Research and innovation: Ethiopia will need to continue its focus on developing its research institutions with a focus on innovations and operational research on what works for Ethiopia's context.

10. References

1. Success factors for women's and children's health: multisector pathways to progress [website]. Geneva: The Partnership for Maternal, Newborn & Child Health; 2014. http://www.who.int/pmnch/knowledge/publications/successfactors/en/ (accessed 25 April 2014).
2. Kuruvilla S, Schweitzer J, Bishai D, Chowdhury S, Caramani D, Frost L, et al. Success factors for reducing maternal and child mortality. Bulletin of the World Health Organization. 2014;92(7):533–44. http://dx.doi.org/10.2471/BLT.14.138131
3. Population projection of Ethiopia for all regions at Wereda level from 2014 – 2017. Addis Ababa: Central Statistical Agency (CSA); 2013. http://www.csa.gov.et/images/general/news/pop_pro_wer_2014-2017_final (accessed 20 July 2014).
4. Ethiopia demographic and health survey 2011. Addis Ababa and Calverton (MD): Central Statistical Agency [Ethiopia] and ICF International; 2012. http://www.usaid.gov/sites/default/files/documents/1860/Demographic%20Health%20Survey%202011%20Ethiopia%20Final%20Report.pdf (accessed 11 August 2014).
5. Brief note on the 2005 (EFY) GDP estimates series [2013 GC]. Addis Ababa: Ministry of Finance and Economic Development (MOFED); 2013. http://www.mofed.gov.et/English/Resources/Documents/THE%202005%20EFY%20GDP%20and%20OTHER%20RELATED%20MACROECONOMIC%20INDICATORS.PDF (accessed 12 August 2014).
6. World Development Indicators. GDP per capita, PPP [online database]. Washington (DC): World Bank; 2013. http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD (accessed 25 April 2014).
7. World Bank Ethiopia Overview [webpage]. Washington (DC): World Bank; 2013. http://www. worldbank.org/en/country/ethiopia/overview
8. Ethiopia economic update: laying the foundation for achieving middle income status [webpage]. Washington (DC): World Bank; 2013. http://www.worldbank.org/en/news/press-release/2013/06/18/ethiopia-economic-update-laying-the-foundation-for-achieving-middle-income-status
9. The 1990 national family and fertility survey. Addis Ababa: Central Statistical Authority; 1993.
10. Ethiopia national health accounts 1995-1996. Addis Ababa: Federal Ministry of Health; 2001.
11. United States Agency for International Development (USAID), Ministry of Health (Ethiopia), Abt Associates Inc. Ethiopia national health accounts 2004-2005. Bethesda (MD): Abt Associates Inc.; 2006.
12. Ethiopia's fifth national health accounts 2010/2011. Addis Ababa: Ethiopia Federal Ministry of Health (FMOH); 2014. https://www.hfgproject.org/wp-content/uploads/2014/04/Ethiopia-Main-NHA-Report.pdf (accessed 11 August 2014).
13. Health and health related indicators 2004 E.C 2011/12 G.C. Addis Ababa: Ethiopia Federal Ministry of Health (FMOH); 2013. http://www.moh.gov.et/documents/26765/28902/Health+and+Health+Related+Indicators+2004+E.C/01253d1d-84f6-4de8-9f99-dff81925273e?version=1.0 (accessed 12 August 2014).
14. Health and health related indicators 1999-2000. Addis Ababa: Federal Ministry of Health; 2001.
15. Education statistics annual abstract 1993 EC/2000-01/. Addis Ababa: Federal Ministry of Education; 2001. http://www.moe.gov.et/English/Resources/Documents/eab93.pdf (accessed 12 August 2014).
16. Education statistics annual abstract 2005 EC (2012/13 GC). Addis Ababa: Federal Ministry of Education; 2013. http://www.moe.gov.et/English/Resources/Documents/eab05.pdf (accessed 12 August 2014).
17. Report on the 1996 welfare monitoring survey. Addis Ababa: Central Statistics Authority; 1999. http://catalog.ihsn.org/index.php/catalog/1434 (accessed 12 August 2014).
18. Report on the 2000 welfare monitoring survey. Addis Ababa: Central Statistics Authority; 2001. http://catalog.ihsn.org/index.php/catalog/159 (accessed 12 August 2014).
19. Report on the 2011 welfare monitoring survey. Addis Ababa: Central Statistics Authority; 2013. http://catalog.ihsn.org/index.php/catalog/3124 (accessed 12 August 2014).
20. United Nations Interagency Group for Child Mortality Estimation. Levels and trends in child mortality. New York (NY): United Nations Children's Fund; 2014. http://www.childmortality.org/files_v19/download/unicef-2013-child-mortality-report-LR-10_31_14_195.pdf (accessed 20 December 2014).
21. Trends in maternal mortality: 1990 to 2013. Estimates by WHO, UNICEF, UNFPA, The World Bank and the United Nations Population Division. Geneva: World Health Organization; 2014. http://apps.who.int/iris/bitstream/10665/112682/2/9789241507226_eng.pdf?ua=1 (accessed 20 July 2014).
22. Assessing progress towards the Millennium Development Goals: Ethiopia MDGs report 2012. Addis Ababa: Ministry of Finance and Economic Development (MOFED) and the United Nations Country Team; 2012. http://www.et.undp.org/content/dam/ethiopia/docs/Ethiopia%20MDG%20Report%202012_Final.pdf (accessed 20 July 2014).
23. Ethiopia Mini Demographic and Health Survey 2014. Addis Ababa: Central Statistical Agency; 2014.
24. Performance Monitoring and Accountability 2020 [website]. Baltimore (MD): Johns Hopkins University; 2014. www.pma2020.org (accessed 24 July 2014).
25. Getachew A, Ricca J, Cantor D, Rawlins B, Rosen H, Tekleberhan A, et al. Quality of care for prevention and management of common maternal and newborn complications: a study of Ethiopia's hospitals. Baltimore (MD): JHPIEGO; 2011. http://www.mchip.net/sites/default/files/Ethiopia_QoC_formatted_final.pdf (accessed 11 August 2014).
26. World Development Indicators [online database]. Washington (DC): World Bank; 2013. http://data.worldbank.org/indicator/ (accessed 30 November 2013).

27. AIDSInfo [online database]. Geneva: UNAIDS; 2013. http://www.unaids.org/en/dataanalysis/datatools/aidsinfo/ (accessed 12 August 2014).
28. Kidane T, Yigzaw A, Sahilemariam Y, Bulto T, Mengistu H, Belay T, et al. National EPI coverage survey report in Ethiopia, 2006. Ethiop. J. Health Dev 2008;22(2): 148-157. http://ejhd.uib.no/ejhd-v22-n2/148%20National%20EPI%20coverage%20survey%20report%20in%20Ethiopia,%202006.pdf (accessed 12 August 2014).
29. Ethiopia: WHO and UNICEF estimates of immunization coverage: 2012 revision [web resource]. Geneva: WHO and UNICEF; 2013. http://www.childinfo.org/files/Ethiopia_2000_2012.pdf (accessed 12 August 2014).
30. Global Humanitarian Assistance: Ethiopia Overview [website]. Bristol: Development Initiatives; 2014. http://www.globalhumanitarianassistance.org/countryprofile/ethiopia (accessed 11 August 2014).
31. Health Sector Development Programme IV Annual Performance Report, EFY 2005 (2012/13). Version 1. Addis Ababa: Ethiopia Federal Ministry of Health (FMOH); 2013. http://www.moh.gov.et/documents/26765/1612928/Annual+Performance+Report+EFY2005/edac28ed-1365-4d9a-b734-ac4fc352de5e?version=1.1 (accessed 11 August 2014).
32. Ethiopia's fourth national health accounts 2007/2008. Addis Ababa: Ethiopia Federal Ministry of Health (FMOH); 2010.
33. Accorsi S, Bilal NK, Farese P, and Racalbuto V. Countdown to 2015: comparing progress towards the achievement of the health Millennium Development Goals in Ethiopia and other sub-Saharan African countries. Trans R Soc Trop Med Hyg. 2010 May. 104(5): 336–42. http://dx.doi.org/ 10.1016/j.trstmh.2009.12.009
34. UNFPA Ethiopia News: Health professionals graduate in an innovative programme to reduce maternal mortality [webpage]. Addis Ababa: UNFPA; 2012. http://ethiopia.unfpa.org/2012/02/21/4604/health_professionals_graduate_in_an_innovative_programme_to_reduce_maternal_mortality/
35. Health Sector Development Programme IV (2010/11 – 2014/15). Addis Ababa: Ethiopia Federal Ministry of Health (FMOH); 2010. http://phe-ethiopia.org/admin/uploads/attachment-721-HSDP%20IV%20Final%20Draft%2011Octoberr%202010.pdf (accessed 11 August 2014).
36. Abdella A. Maternal mortality trend in Ethiopia. Ethiop. J. Health Dev. 2010;24 Special Issue 1:115-122. http://ejhd.uib.no/ejhd-v24-sn1/115%20Maternal%20Mortality%20Trend%20in%20Ethiopia.pdf (accessed 11 August 2014).
37. Singh S, Fetters T, Gebreselassie H, Abdella A, Gebrehiwot Y, Kumbi S, et al. The estimated incidence of induced abortion in Ethiopia. Int Perspect Sex Reprod Health. 2010 Mar; 36(1):16–25. http://ncbi.nlm.nih.gov/pubmed/20403802 (accessed 11 August 2014).
38. Improving child nutrition: the achievable imperative for global progress. New York (NY): UNICEF, 2013. http://www.unicef.org/publications/files/Nutrition_Report_final_lo_res_8_April.pdf (accessed 12 August 2014).
39. Annual report of Tigray Regional Health Bureau 2005. Mekelle: Tigray Regional Health Bureau; 2005.
40. Ethiopia mini demographic and health survey 2014. Addis Ababa: Central Statistical Agency (CSA); 2014.
41. Ethiopia demographic and health survey 2005. Addis Ababa and Calverton (MD): Central Statistical Agency (CSA) and ORC Macro; 2006. http://dhsprogram.com/pubs/pdf/FR179/FR179[23June2011].pdf (accessed 11 August 2014).
42. The state of the world's children 2008: child survival. New York (NY): UNICEF; 2007. http://www.unicef.org/sowc08/ (accessed 11 August 2014).
43. Global experience of community health workers for delivery of health related Millennium Development Goals: a systematic review, country case studies, and recommendations for integration into national health systems. Geneva: WHO and Global Health Workforce Alliance (GHWA); 2010. http://www.who.int/workforcealliance/knowledge/publications/CHW_FullReport_2010.pdf?ua=1 (accessed 11 August 2014).
44. Bilal N. for the Health Systems 20/20 project. Health extension program: an innovative solution to public health challenges of Ethiopia - a case study. Washington (DC): USAID; 2012. http://www.healthsystems2020.org/files/85866_file_Ethiopia_Health_Extention_Program_Case_Study.pdf (accessed 11 August 2014).
45. Worku I. Road sector development and economic growth in Ethiopia. EDRI Working Paper 4. Addis Ababa: Ethiopian Development Research Institute (EDRI); 2011. http://www.edri-eth.org/Documents/EDRI_WP004_RoadSector.pdf (accessed 11 August 2014).
46. Engel J and Rose P. Ethiopia's story: Ethiopia's progress in education: a rapid and equitable expansion of access. London: Overseas Development Institute (ODI); 2010. http://www.developmentprogress.org/sites/developmentprogress.org/files/ethiopia_web_master_final.pdf (accessed 11 August 2014).
47. Interviews with Dr. Tewodros Bekele, Director, Maternal and Child Health Directorate, Ethiopian Federal Ministry Of Health and Dr. Gebre Kidan Mesfin, Health Service Delivery and Financing, WHO, Ethiopia.
48. Worldwide Governance Indicators: Country Data Reports [online database]. Washington (DC): World Bank; 2013. http://info.worldbank.org/governance/wgi/index.aspx#countryReports (accessed 24 July 2013).
49. All eyes on Ethiopia's national health extension program [webpage]. Addis Ababa: USAID. http://www.usaid.gov/results-data/success-stories/all-eyes-ethiopia%E2%80%99s-national-health-extension-program-0
50. Yale News: Yale honors Ethiopian minister of health at global conference [webpage]. New Haven (CT): Yale University; 2012. http://news.yale.edu/2012/06/11/yale-honors-ethiopian-minister-health-global-conference
51. Loewenberg S. Ethiopia struggles to make its voice heard. Lancet. 2010 Sep: 376(9744); 861–862. http://dx.doi.org/10.1016/S0140-6736(10)61397-9

II. Acronyms

ANC	Antenatal Care
ARM	Annual Review Meeting
ART	Antiretroviral Therapy
CBNC	Community Based Neonatal Care
COMBINE	Community-based Interventions for Newborns in Ethiopia
CPR	Contraceptive Prevalence Rate
DHS	Demographic and Health Survey
DTP	Diphtheria, Tetanus and Pertussis
EDHS	Ethiopia Demographic and Health Survey
EPI	Expanded Program on Immunization
FMOH	Federal Ministry of Health
FP	Family Planning
GDP	Gross Domestic Product
GER	Gross Enrolment Ratio
GINI	A measurement of income inequality
H4+ group	WHO, UNICEF, UNFPA, UN Women, World Bank and UNAIDS
HDA	Health Development Army
HEP	Health Extension Programme
Hep B	Hepatitis B
HEW	Health Extension Workers
Hib 3	Haemophilus influenza type B vaccine
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
HMIS	Health Management Information System
HRH	Human Resources for Health
HSDP	Health Sector Development Programme
ICCM	Integrated Community Case Management
IESO	Integrated Emergency Surgery and Obstetrics
IHP	International Health Partnership
IMNCI	Integrated Management of Neonatal and Childhood Illness
IYCF	Infant and Yong Child Feeding
JCCC	Joint Core Coordination Committee
JCF	Joint Coordination Forum
JFA	Joint Financing Agreement
JRM	Joint Review Mission
LB	Live Births
LMIC	Low- and Middle-Income Countries
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MDSR	Maternal Death Surveillance and Review
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
MSc	Master of Science
NHA	National Health Account
NICU	Neonatal Intensive Care Unit
NNP	National Nutrition Programme
PMNCH	Partnership for Maternal, Newborn and Child Health
PMTCT	Prevention of Mother-to- Child Transmission
PPP	Purchasing Power Parity
QCA	Qualitative Comparative Analysis
RHB	Regional Health Bureau
RMNCH	Reproductive, Maternal, Newborn and Child Health
U5MR	Under 5 Mortality Rate
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
URRAP	Universal Rural Road Access Program
US	United States
USD	United States Dollar
WHO	World Health Organization

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