

Reviewing Ethiopia's Health System Development

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A country in the horn of Africa region and one of the oldest states, Ethiopia has poor health outcomes even by sub-Saharan Africa's standards characterized by many decades without a national health policy, weak healthcare system infrastructure and low government spending.¹ Crucially, Ethiopia has taken critical steps in policy and programs to improving the country's health status. Nevertheless, a World Bank study simulating different scenarios to meet the United Nations Millennium Development Goals (MDGs) on health in the country shows that unprecedented levels of aid flow would be needed.² This paper overviews key health measures of Ethiopia and discusses some of the challenges as well as prospects for improvements of the country's health outcomes.

The Health Situation in Ethiopia

Country profile and health policy development

Like many other countries in sub-Saharan Africa, Ethiopia is a country of diverse cultures, traditions and histories. In spite of its ancient civilizations and being the only other country in the continent that was not colonized as well as one of the oldest territorially integral nation in the world, Ethiopia today is one of the least developed countries with low development indicators. In comparison, for example, although Ethiopia has more than double the population of neighboring Kenya, its health care system in terms of infrastructure and personnel is about one third of Kenya's. With a population of about 70 million, it is also the third most populous country in Africa. Eighty-two percent of the population lives under a dollar a day, 44% living below the national poverty line.³

Table 1 shows the key country's health related demographic and socio-economic indicators.

Ethiopia is a democracy with a federal system of government comprising 9 regions and two administrative councils. These are further subdivided into 62 zones and 523 districts or *woredas* (in Amharic). In the mid 1990s, the Ethiopia People's Revolutionary Democratic Front (EPRDF) took power promising a democratic environment. In 1993 the government published the country's first health policy in 50 years setting the vision for the healthcare sector development for the next two decades.¹⁰ The policy tried to reorganize the health services delivery system with the objective of contributing positively to the overall socio-economic development effort of the country.³ Major aspects of this policy focus on fiscal and political decentralization, expanding the primary health care system, and encouraging partnerships and the participation of non-governmental actors.

To implement the policy, the Health Sector Development Program (HSDP) was developed in 1997/98, and a healthcare and financing strategy in 1998. The program under HSDP-I covered the first five years (1997/98–2001/02) and prioritized disease prevention and decentralizing health services delivery.¹¹ The targets set in HSDP-I were not met and a new strategy, HSDP-II (2002/03–2004/05), was developed with an added aim of including NGOs in the implementation of a basic health package.¹² In pursuant of the health policy goals of improving the health status of the Ethiopian population using the cycle of the five-year term health strategy framework, HSDP-III was developed in 2005 to run through 2005/06–2009/10.¹³ This latest strategy stresses the need

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Table 1 Key socio-demographic and health indicators, Ethiopia (various years)

Indicator	Ethiopia
Population (mil) (2004)	75
Pop. growth rate %	2.5
Life expectancy (2007)	48
Under 5 mortality rate per 1,000 (2005)	123
Maternal mortality rate (2005)	673
Poverty rate (\$/d) % (2000)	82
GNI per capita \$ (2007)	160
Overseas dev. assistance % GNP	21.6
ODA per capita (2005)	27
Pop. with HIV % (2007)	2.1
Health expenditure % of GDP	3.5
Health expenditure per capita (2003)	5.6
Health personnel total (2007)	46,666
Physician/population (2007)	42,706
Health facilities total (2007)	14,041
Health facilities/ population (2007)	5,493

Sources: Ethiopia DHS 2005⁴; The Little Book of Data 2007⁵; DFID 2007⁶; Ethiopia 3rd National Health Accounts 2006⁷; Ethiopia Health Sector Strategic Plan III, 2005⁸; Ethiopia Health and Health Indicator 2007.⁹

to increase national health spending, the strategic role of NGOs as partners in achieving universal primary healthcare coverage not only in planning but also implementing healthcare delivery particularly at the *woreda* level and also emphasizes the need to strengthen government-NGOs collaboration. Complementing these frameworks, Ethiopia's social-development program, the 2002 medium-term poverty reduction strategy paper (PRSP) termed Sustainable Development and Poverty Reduction Program (SDPRP),³ recognizes the need to further development through improving governance and human rights. This framework is repeated in the second PRSP called Plan for Accelerated and Sustained Development to End Poverty (PASDEP) for 2005/06–2009/10, Ethiopia's development blueprint.¹⁴

Situational analysis of the health care system

The health service system in Ethiopia is federally decentralized along the nine regions. Table 2 below shows the health facilities distribution in Ethiopia by region and by type as of year 2006/07. The infrastructure comprises a total of about 14,000 health facilities which include 143 hospitals, 690 health centers, and 1,662 health stations of which

Table 2 Distribution of health infrastructure by region (2006/07)

Region	Hospitals				Health centers				Health stations**			Health posts	Private clinics**
	MOH	Others*	Total	Beds	MOH	Others	Total	Beds	MOH	Others	Total		
Tigray	13	3	16	1,417	41	1	42	380	167	15	182	529	31
Afar	2	0	2	122	14	0	14	0	45	0	45	154	3
Amhara	16	3	19	1,615	169	0	169	369	0	40	40	2,590	304
Oromia	22	8	30	3,513	197	5	202	—	717	100	817	1,985	672
Somali	6	0	6	436	20	0	20	276	75	0	75	149	2
Ben-Gumz	2	0	2	205	15	0	15	150	56	0	56	88	19
SNNPR	14	6	20	1,897	176	4	180	—	179	77	256	4,258	116
Gambella	1	0	1	100	5	4	9	50	27	8	35	64	7
Hareri	2	2	4	710	3	0	3	30	9	10	19	22	21
Addis A	5	25	30	927	24	5	29	180	8	122	130	37	382
Dire Dawa	1	3	4	232	7	0	7	60	0	7	7	38	21
Central	4	5	9	2,460	0	0	0	0	0	0	0	0	0
National	88	55	143	13,677	671	19	690	1,495	1,283	379	1,662	9,914	1,578

Source: Ethiopia HSDP-III, 2005⁸; Health and Health Indicator 2007⁹

Note: — no data; * hospitals owned private entities, NGOs and other government entities; ** data is for 2004/05.

62%, 97% and 77%, respectively, were owned by the Ministry of Health. Of the hospitals there are 5 central teaching institutions. The health posts are virtually entirely owned by the government. The differentiation of the various service levels

is made typically by population size. According to calculations given by the Federal Ministry of Health (FMOH), a health center serves an estimated 25,000 persons, a health station 10,000, and a health post and private clinic 5,000.

Table 3 Growth of functioning health facilities in Ethiopia (1996/97–2001/02)

Health facilities		1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Number of hospitals	Government	46	59	55	64	68	68
	NGO	17	17	17	17	17	18
Number of health centers	Government	241	262	294	344	369	384
	NGO	5	5	6	23	17	26
Number of health stations	Government	2,202	2,173	2,118	2,031	2,019	2,019
	NGO	13	14	15	268	374	312
Number of health posts		76	164	373	893	1,063	1,193
Total		2,600	2,694	2,878	3,640	3,927	4,020
Number of health facilities per 100,000 population		4.5	4.5	4.5	5.7	6	6

Source: Ethiopia MDGs Progress Report 2004, p.24¹⁶; Ethiopia HSDP-II.¹²

Table 4 Demographic, health system, per capita expenditure and IMR (2007)

Region	Population	Health facilities*	Health personnel**		Physician: population ratio	Public health expend per capita (ETB)	IMR/1000
			Physicians	+ All others			
Tigray	4,449,000	800	59	5,265	75,407	22.9	67
Afar	1,418,000	218	10	595	141,800	19.9	61
Amhara	19,624,000	3,122	133	11,013	147,549	10.9	94
Oromia	27,304,000	3,760	149	12,133	183,248	13.9	76
Somali	4,444,000	252	53	912	83,849	17.3	57
Ben-Gumz	640,000	180	6	569	106,667	42.2	84
SNNPR	15,321,000	4,830	155	7,803	98,845	10.7	85
Gambella	253,000	116	4	545	63,250	52.6	92
Hareri	203,000	69	41	408	4,951	75.2	66
Addis Ababa	3,059,000	608	118	1,433	25,924	26.8	45
Dire Dawa	412,000	77	31	416	13,290	4.7	71
Others**	—	9	1,047	8,382	—	—	—
National	77,127,000	14,041	1,806	46,666	42,706	15.5	77

Source: Ethiopia HSDP-III⁸; Health and Health Indicator 2007⁹

Notes: *Health facilities include all hospitals, health centers, health stations, health posts and private clinics. The hospitals include 5 central institutions listed separately. These data may vary between the various government sources but here we use the Health and Health Indicator 2007.⁹

** Health personnel include physicians and all cadres of nurses. The tally for the regions does not make up the total number shown in this table. The government lists in separates categories other data for the human resources by sectors (NGO, other government and private) as well as a separate account for the Central hospitals. When these are added they make up the total figures shown in this column. These data may vary between the various government sources but here we calculate using the Health and Health Indicator 2007.⁹

In recent years the national health delivery infrastructure has grown significantly. As shown in Table 3, the overall number of all facilities has increased by 55% during 1996/97 to 2001/02. This rate of increase was greater than that of population growth hence it is reflected in the improvement of the population-facility ratio. On the other hand, it can also be noted that the government-owned health stations have decreased while ownership by NGOs has risen during the same period. The trend is the result of a deliberate policy by the government to decrease its involvement at this level while focusing on health posts and health centers and, thus, allowing NGOs to play a greater role particularly here as represented by their exponential growth. NGOs provide financing and general (curative, preventive and rehabilitative) healthcare services, HIV/AIDS and reproductive health services in clinics and through health education. According to one source citing a household welfare survey on health utilization, 3.3% of respondents reported using NGO services.¹⁵ The growth of the health infrastructure has raised the average national health coverage to 64%. Nevertheless, annual utilization per capita remains very low at only 0.36 (36%) for the national average as at 2004.⁸ And while antenatal coverage has grown from 34% in 2002 to 52% in 2007, supervised deliveries have remained low at 7% and 19% in the same period.¹³

To further analyze the picture, in Table 4 we disaggregate the health facilities data presented in Table 2 combining with health personnel data and expenditure per capita by region. There are over 46,000 health workers who include physicians and all cadres of nurses, laboratory technicians, environmental health workers, and traditional birth attendants. The physician to

population ratio of about 42,000 is well below the WHO standard of 1:10,000 and is over five times below the average for sub-Saharan Africa.¹⁷ As depicted by these tables, there is a wide variation in the distribution of health care facilities, health personnel and health expenditures across the different regions of the country. Such variations exacerbate the health inequalities in the country.

Health Care Financing

The state of healthcare financing in Ethiopia has over the years been characterized by low government spending and minimal participation of the private sector. With the government having the major responsibility changes in the political regimes has meant that the politics of the day have had much influence on the financing policy environment. Per capita spending has remained below the sub-Saharan Africa average of US\$12.⁸ During the Derg regime, in the late 1970s through the 1980s the ministry of health spending as a share of government expenditure declined from more than 4% to 2.8%. In 1991, government spending amounted to only 1% of the GDP. With the new government that came to power in the mid 1990s, this increased slightly to about 2.7% in 1996 and to 5% during 2004/05.⁷

Health financing in Ethiopia comes from a variety of sources as shown in Table 5. According to these data from the 3rd National Health Accounts (NHA), the government and other public enterprises provides 31% of the financing, donors and NGOs 37%, households 31% and other private employers and funds about 2%. The share of government and households financing has decreased from 33% and 36%, respectively, in 1999/00.¹⁸ On the other hand, the share

Table 5 Total and per capita health expenditure by major source classifications (Fiscal year, 1997 EC; 2004/05 GC)

Source	Amount in USD	Per capita USD	Percent
Government	159,297,649	2.18	31
Donors and NGOs (inter + local)	192,293,175	2.63	37
Household	160,042,854	2.19	31
Private employers and private funds	10,095,901	0.13	2
Total	521,729,581	7.14	100%

Source: Ethiopia 3rd NHA.⁷

Note: EC stands for Ethiopian Calendar and GC for Gregorian Calendar.

of foreign financing and NGOs has grown from 26%; the second NHA reported that in 2000 the Ethiopian health NGO community contributed 10% of the national health expenditure up from 7% in the first NHA (1996).¹⁸

As shown in Table 5, the average national per capita spending in 2004/05 was US\$7.14. On the other hand, in Table 4 we see that public health financing comprised only Ethiopian Birr (ETB) 15.5 (about US\$1.3). This represents a significant increase from ETB 2.1 (US\$0.2) in 1990. There are extreme variations across regions with the highest spending per capita in Hareri (Birr 75.2 or about US\$6.3) and the lowest in Dire Dawa (ETB 4.7 or US\$0.4). The disparity in spending is largely due to the fact that fiscal decentralization grants regional governments the right to allocate government funds, most of which is federally provided; about 80% of health expenditure at regional levels is grants allocated to each region on the basis of formula of weighted variables namely, population size, level of development and level of revenue generation.¹⁹

Figure 1 below depicts the trends in the public healthcare budget allocation and expenditure during a 15 year period (1981–1996 EC; 1989–2004 GC). As can be seen, government spending has increased significantly; in 2008 amounted to 2.3 billion BIR (about US\$189 million).²⁰ Seventy-six percent of the expenditure is in curative services with a slight increase in preventive health spending from 17% in 2000 to 24% in 2005.⁴

Major Health Concerns Despite Improvements

Ethiopia has seen positive developments in many health indicators since the democratic government process began in the early 1990s: the health service system has expanded; overall and per capita health spending has increased significantly; and there is a policy and program for health improvements in the country focusing on expanding primary health coverage universally. In addition to these improvements, there has been a significant increase in the number of human resources for health. For example, during 1997–2007 the number of nurses increased from just about 2,800 to over 18,000²¹ and the country has moved from having the worst doctor-patient ratio in the world of 1:48,000 in 1999 to 1:42,000.¹⁷ Child immunization coverage has also increased from 30% in 2002 to 53% in 2007 while antenatal coverage rose from 34% to 52% during the same period.⁹ Overall, maternal and child health utilization has increased marginally²² while child malnutrition has decreased steadily²³ leading to notable improvements in IMR, U5MR and MMR.^{1,4,21}

Despite these improvements and with a rapidly increasing population, Ethiopia faces major health concerns. Constraints in the delivery of services include: the low number of health care facilities which are ill-equipped, mal-distributed and in a state of disrepair; an ineffective health

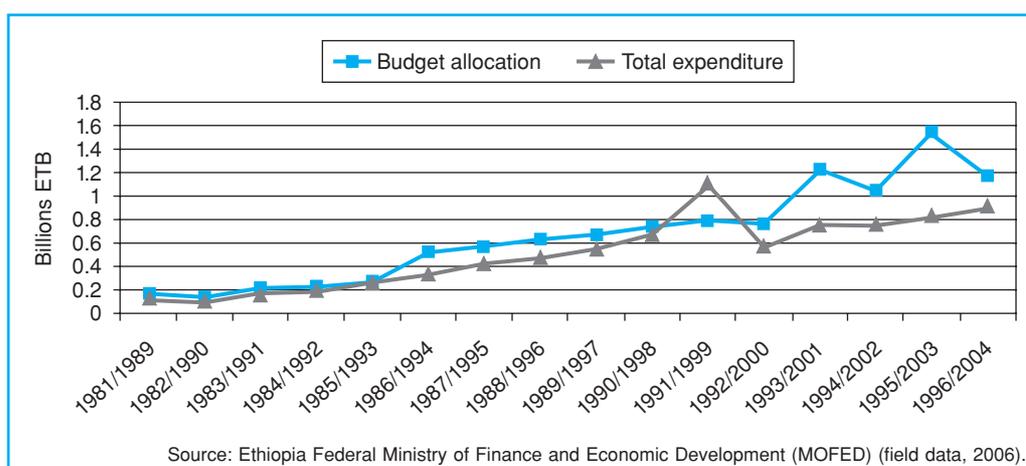


Fig. 1 Public health expenditure, 1981–1996 EC (1999–2004 GC)

care delivery system which is inefficient and biased towards the curative service; a undemocratic health care delivery system and management which although decentralized at the regional level still relies on centralized policy making and budgets; an acute shortage of human and material resources; and inefficient utilization of the available while little involvement and participation of the private and NGO sectors as well as the beneficiary communities.²⁴ In addition to these, some of the critical challenges in the healthcare system include: strengthening primary preventive/promotive healthcare through greater investments; where more than 80% of common diseases, and the disease burden, are communicable and infectious, this is extremely critical.

Ethiopia has a long way to go to reach the level of health spending recommended for a minimum and decent quality of essential health services.²⁵ In the early 1990s the World Bank had estimated that the annual cost per capita of delivering the package of essential services*² in Ethiopia would be US\$12 (in 1990 US\$).²⁶ However, the WHO set the required target in low income countries at US\$34 per capita.²⁷ And at 3.5% of government spending on health in 2008/2009,²⁰ Ethiopia is far from achieving the 15% share of government expenditure agreed upon by the member states of the WHO Africa region.²⁸ More recent data show the gap to be US\$15.41 needed to reach the MDGs⁷ with needed annual foreign financing of US\$60 per capita.²³ However, if recent trends continue the per capita spending will only reach US\$19.44 in 2015.⁷ Even that is uncertain as estimates for the mid-term review of HSDP-III show a decrease to US\$3, far from meeting the target of US\$9.6 in 2010.²¹

Conclusion

As the World Bank admits, sub-Saharan Africa will not reach the malnutrition and child mortality targets, as well as some areas in communicable diseases at current pace of implementation.²⁹ There is need to accelerate improvements in the country's healthcare system if Ethiopia expects to reach its health targets and the MDGs for health. In addition to a concerted focus for pri-

mary health system development and strengthening as recommended by the WHO,^{26,28,30,31} a number of areas deserve particular attention. The Health Sector Development Program (HSDP) is a critical national health planning process. However, many of its objectives have remained unachieved despite revision in the successive plans; a mid-term review of HSDP-III shows a near 100% in health coverage as indicated by the availability of primary health services (health posts, health extension workers and kits for essential health services) but outpatient utilization rate per person per year is only 0.32, far short of the target of 0.66 with only about a year left to 2010.²¹ This shows that the increase in availability of services does not guarantee utilization. At the same time, increase in antenatal coverage has not resulted in equal levels of supervised deliveries. Hence, improving health will require increasing health service utilization, particularly the critical maternal and child health services, as a matter of priority, and this cannot be done by merely increasing services availability but by providing quality and reliable services.

Secondly, there is need to rethink the organization and management of the service system. While federal fiscal decentralization at the regional level may satisfy a political goal, it has resulted in imbalances in the health spending. This notwithstanding, the process of deepening decentralization to *woreda* levels has been very slow depriving popular participation by civil society organizations and communities.¹⁵ To achieve this capacity building of the health management levels at national, regional and *woreda* levels will be needed. The recent reform of the Ministry of Health through the business process re-engineering (BPR), aimed at improving performance through the introduction of business-process measures and indicators in the government system,²¹ may help improve technical and allocative efficiency and thereby increase standards and quality but its results are yet to be seen.

A third area critical to improving health in Ethiopia is in human resources for health. The current pillar for improving primary health coverage to universality is anchored on the health extension program (HEP), the central component being

*2 The package defined by the World Bank include reduction of maternal mortality by deploying more extensive, professional, pre-natal, childbirth and postpartum care and better access to family planning services, provision of drug therapy for tuberculosis, control of STDs, prevention of and care for sufferers from common illnesses among children—measles, malaria, diarrhea, respiratory infections and malnutrition.²⁵

the massive training and deployment of health extension workers (HEWs) in basic clinical and drugs skills.⁸ The rural health worker program, highly dependent on donors, will increase probability of patients' contact with health services. However, an overemphasis and high expectations may overshadow other human resource and management and other programmatic needs as well as nurture corruption.³² There needs to be a focus on training and retaining skilled personnel such as physicians, nurses and skilled birth attendants in the health system.

At 5.6% of the GDP health spending remains extremely low in Ethiopia even by sub-Saharan African levels. With current levels of poverty it is clear that burdening households further through high user fees will only alienate them from the health service system.¹ Hence, massive increases in government expenditure far and beyond the target set for HSDP-III as well as additional foreign funding is critically needed to reach the MDGs for health and the country's vision for

equitable health.²³ At the same time, to avoid skewed developments in health outcomes across the regional levels, minimum levels of budgetary allocations through earmarking or other obligations may help standardize spending.

Finally, improvements in the health outcomes can be made proactive and concerted intervention by all the stakeholders in a sector-wide approach that is deliberate and collaborative. Because of the multiplicity of the stakeholders comprising local and foreign (government, private, NGOs and donor) agencies, collaboration and coordination is necessary to achieve the desired results.^{15,25,32-34} Such coordination will help maximize the efficacy of donor assistance and avoid duplication of effort. Towards this end, the government needs to provide the needed leadership, governance framework and stewardship in this area. Without harmonization and leadership a responsive and effective health system meeting the right to health for Ethiopians cannot emerge.

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