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MINISTRY of HEALTH

ENVISIONING ETHIOPIA's PATH TOWARDS UNIVERSAL HEALTH COVERAGE THROUGH STRENGETHENING PRIMARY HEALTH CARE

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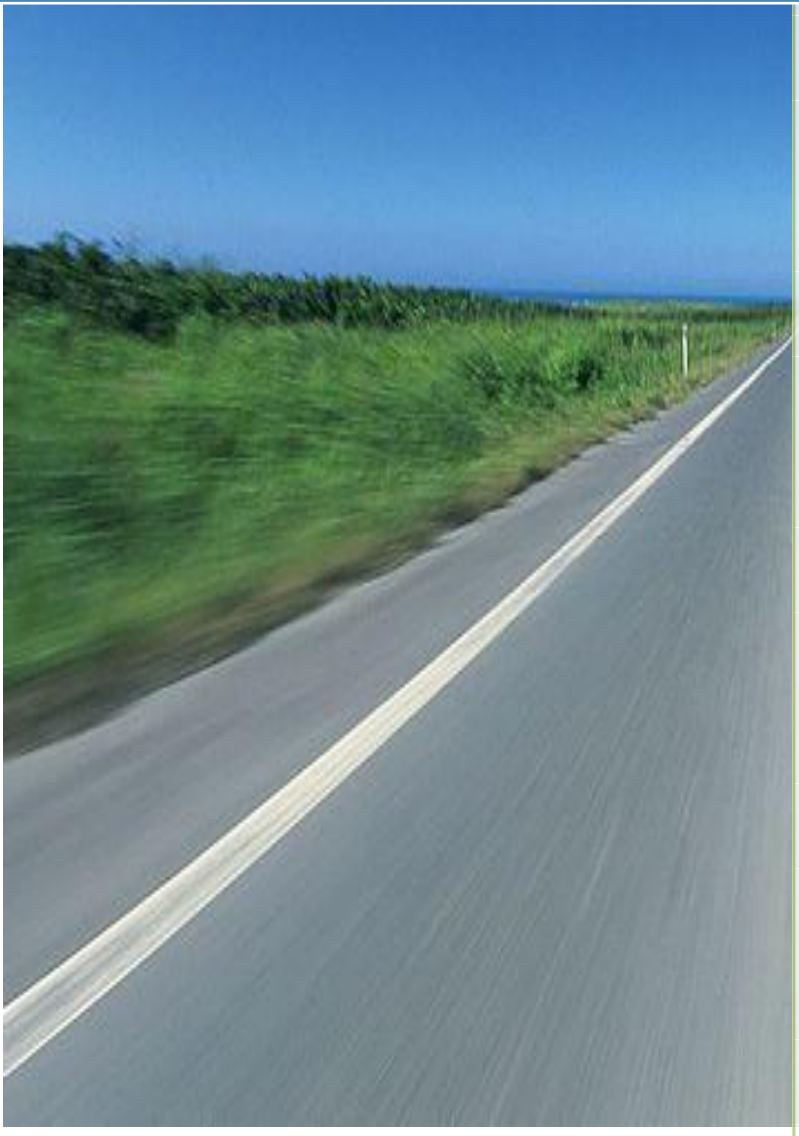

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Over the last decade, Ethiopia has made great improvements in many health indicators, due in large part to a well-coordinated, extensive effort and intensive investment of the government, partners and the community at large in Primary Health Care (PHC) through the Health Extension Program and expansion of PHC units. It is a priority of the Ministry of Health (MoH) to expand and sustain this progress, which will require envisioning the future healthcare system and strategic planning. For over two years, the Ministry of Health has engaged in an envisioning exercise to think broadly and strategically about the long-term development of the Ethiopian health system with particular emphasis to primary healthcare system. This activity was carried out through involvement of various experts with a serious of consultations with local and international stakeholders. The purpose of the envisioning exercise was to envision a system that will be equitable, sustainable, adaptive and efficient, and will meet the health needs of Ethiopian population between now and 2035. It is anticipated that in the coming 20 years, Ethiopia will continue it's fast pace of economic development, and will transition to being a lower-middle income country by 2025, and a "middle-middle income country" by 2035[1].

Universal health coverage (UHC) is a direction that Ethiopia follows in its health sector transformation aligning with the country's overall Growth and Transformation Plan (GTP) . UHC is defined in this context as guaranteeing access to all essential services as will be defined in each health sector strategic plans for everyone while providing protection against financial risk. As Ethiopia advances to middle income country status, its goal is to progressively realize progress towards UHC with ever improving essential service packages to all Ethiopians as will be defined for the strategic periods. As the country transitions, the Government of Ethiopia (GoE) intends to continue to invest in Primary Health Care approach in order to advance the overall health and wellbeing of the population, and serve the priority health needs of the majority of its people. Strong investments in Primary Health Care are anticipated to result in continued improvements in health outcomes, which are already being seen since the launch of the Health Extension Program.

This envisioning document is not intended to be a detailed operational plan, but rather a setting of directions for further development and further analysis. It is an indicative framework of investment plans which would lay out further input for development of the health sector such as health facilities, human resources, other essential inputs, and operational plans that would link these to realistic output, outcome targets and resource requirements– indeed this is what is done through the Health Sector Development Programs (HSDPs) planning process and the annual woreda based planning processes. This envisioning is not a substitute for that planning and therefore it does not provide specific actions or timetables or costs. Rather, it lays out key strategic directions, which will form the basis for the upcoming midterm series of strategic plans. This document can be used as a reference during further health and health related planning processes, such as the development of Health Sector Transformation Plan (HSTP), planning for human resources for health, health infrastructure development plan and in the development of health financing strategies. The vision contained in this document will, and should, also evolve as new learning and experience is gained

[1] Middle-middle income country is an operational definition given in this document as a country lies between LMIC and UMIC levels.

in implementing health programs particularly Primary Health Care and as conditions in Ethiopia change with the broader development.

Six strategic areas have been developed, which highlight priority areas for continued investment to improve Primary Health Care. Each strategic area is supported by sub-strategies that offer more specific recommendations. These strategies incorporates findings of reviews of the HSDPs, surveys, local and international reports and literatures as well as an in-depth situation analysis conducted as part of the visioning exercise in 2012 (Annex), which documented successes and continued challenges faced by the health extension program. Strategies were refined through an iterative process of review by the envisioning committee. There were also inputs from technical groups within the MOH to ensure that strategies were aligned with the current and anticipated future priorities of the programs. Besides, trend analyses of programs conducted by relevant directorates of the MoH in 2013 were used to further inform the envisioning exercise. Technical working groups of programs such as malaria, HIV, TB, maternal, RH, NTD, WaSH, and Eye health programs provided input on strategic recommendations from their programs' prospective. Moreover, consultations were held with management council of MoH, private entities, NGOs and academia as well as international experts organized through Sustainable Development Solution Network (SDSN). The document was also discussed during the 16th Annual Review Meeting in October 2014.

The six priority strategic areas that have been developed are as follows:

1) Empower the community to play a significant role in the health sector

The current organized community or popular mobilization should continue, evolve and be tailored according to the need of the majority. The key question in empowering the community in a sustainable and effective manner is "how can we keep the community in health?". Sub-strategies focus on meaningful participation of community members, building community ownership of health systems, building community representation in health facility governance boards, ensuring health is supported by other sectors and vise versa, increasing household production of health, and ensuring community participation in new health financing approaches. Ultimately, the community should be empowered to produce its own health and play its vital roles in the health sector with the spirit of ownership.

2) Strengthen health service delivery with emphasis on primary health care units (PHCU) within the wider health sector context

Reviewing the functionality the PHC and redefining it accordingly in a wider health sector context is essential to address the need and expectation of the community. Sub-strategies focus on establishing standard care packages at all levels of care including revising Essential Health Service Packages (EHSP), expanding and sustaining numbers of functioning health facilities, establishing effective management structures in PHCUs and networking with higher health care facilities, positioning HEWs within the health care structure to play a better role and developing a team-based approach to Primary Health Care, elevating knowledge and skills of PHCU staff, establishing effective healthcare governance systems, developing a well-functioning supply chain of medicines and medical equipments, quality assurance system and other supportive structures, use of

appropriate technology and enhance capacity of PHCUs to handle public health emergencies.

3) Ensure a robust Human Resources Development system that commensurate with socio economic development of the country as LMIC by 2025 and middle-middle IC by 2035

Ensuring adequate and appropriate skill mix of the health workforce remain the backbone of the health system in the upcoming strategies. Sub-strategies focus on strengthening mechanisms for production and retention of health workers, quality of trainings of health professionals, supporting growth along defined career paths, fostering competency, and strengthening the Human Resources Information System for evidence based decision making in planning, implementation, monitoring and evaluation of the Human Resource Development. The human resource development need to have its own long-term strategic road map and periodically revised to cope with the existing and anticipated health needs of the nation.

4) Enhance role of non state actors in improving health status

Leveraging non state resources is an opportunity to narrow the gaps of resource constraints as well as improve access to the health services. The role of private sector needs to be enhanced to improve access and choices to health care services. Sub-strategies focus on exploring possibilities of encouraging the private providers to improve access to better health care with fair cost , developing capacity within the MOH to manage arrangements for public-private partnerships, strengthening regulatory capacity, encouraging the private sector to take advantage of an enabling policy environment to invest in health, and increasing the engagement of professional associations, civic society and non-governmental organizations in the health sector and provide due attention to traditional or alternative medicine.

5) Develop sustainable financing mechanisms

Financial constraints are among the challenges to avail quality health services to all in need of them. Hence, raising adequate funding for health that address financial barriers to equitable access is vital levers to move in the direction of Universal Health Coverage by eliminating or markedly reducing catastrophic out-of-pocket expenditures. Sub-strategies focus on mobilizing domestic resources for health, fostering for mutual accountability of donor funding for health, developing forecasting and monitoring tool for internal and external funds for health including primary health care, expanding pooling and purchasing mechanisms of developing health insurance models and integrating efficiency gains into the health care financing strategy.

6) Develop Institutional capacity in the health sector to be responsive to changing economic, social, environmental, technical, and epidemiologic context

Institutional capacity building aims at improving performance of institutions and organizations, rather than concentrating exclusively at the individual capacities of staff members. It includes a comprehensive capacity of institutes including human capital, intellectual capital, supplies, infrastructure and capacity to innovate to cope with the ever increasing demand and emerging

circumstances. Starting from the institutional needs ensures that initiatives at the individual level will be meaningful for the institution and the system in general.

Sub-strategies focus on ensuring:

- The **leadership and governance** system in the health sector creates enabling environment to transform the health sector that can cope with the health need and challenges of socioeconomic strides of progression to middle income country. Hence, capacity building efforts of creating and retaining leaders of the health sector need to be institutionalized in a systematic manner at relevant levels. The f**unctional and** organizational structure of the MOH and its agencies, Regional Health Bureaus and District Health Offices and their capacity is expected to support the vision of UHC through the Primary Health Care approach,
- Developing capacity to **conduct researches and use evidences** for decision making and further development. Managing available health and health related information is crucial to ensure institutes are learning organizations. Hence, institutionalizing/mainstreaming knowledge management is instrumental to store and retrieve knowledge, improves collaboration, locates knowledge sources, mines repositories for hidden knowledge, captures and uses knowledge, or in some other way enhances the KM process. ICT can play a pivotal role in knowledge management. The need to tap from rich reso**urce of local universities in improv**ing the capacity in research and development, innovation as well as leadership in the health sector is important to design, implement and monitor locally relevant health programs. Use of scientific advisory committees to advise on key policies, strategies and use of new technologies are essential to ensure technical relevance are well addressed in formulating policies and strategies. The role of local universities should be heightened particularly focusing on the primary health care approaches linking it up with the wider health sector context in scientifically sound and locally acceptable manner.

- Developing capacity **of health and health related** institutions to engage in **multi-sectoral** activities to promote synergy or mitigate unwanted impacts so that health status of the people are getting better as the result of interventions by various institutes.
  .
- All health and health related interventions or programs have the right and adequate **supplies** at the right time. For this to happen, the capacity of supply and logistic system should be enhanced. Essential commodities need to be identified by all levels according to their functions with appropriate and evidence based forecasting and quantification. The procurement and distribution process need to be predictable and avoid stock outs at point of care and relevant storage sites as per the standards. Wastage and non-functional rates should be eliminated or be below the acceptable range requiring proper stock management and maintenance system in place at all times.
- **Regulatory capacity** needs to be strengthened to ensure safety and quality of any health services are given due emphasis. Standards of products, personnel, premises and procedures need to be lay out balancing the need to ensuring quality and safety with the local circumstances of availing health care services in a manner that won't compromise the minimum requirement of client's safety. A mechanism of identifying and addressing counterfeit health products, unethical practices, substandard medical equipments and

unacceptable working environment should always be active and supported by technologies, adequate mix of expertise. Regulatory functions need to be backed up by law enforcing entities.

Furthermore, the following crosscutting issues need to be given due emphasis in capacity building efforts:

- Equity dimensions including gender, place of residence, income level, educational status, people with special need,
- Quality of capacity building efforts
- Use of technology and its transfer to local institutes
- human resource development
- sustainability

If the above areas are strategically prioritized and invested in over the coming years, with flexibility to be responsive to the changing needs and demographics of the population, it is expected that great gains can be made in improving the health status of the Ethiopian population.

4. Background/Introduction

4.1Rational of conducting the envisioning exercise

Ethiopia is now on the verge of concluding the twenty-year Health Sector Development Program (HSDP) following the national health policy in 1993. The HSDP has been implemented in four phases building on lessons learned from phase to phase. The coming strategic documents are required to be customized with the changing landscape due to population dynamics, industrialization, urbanization, globalization, pros and cons of technologies, climate change and triple burden of communicable, non communicable diseases and injuries as well as under nutrition and threat of obesity,. Moreover, the upcoming strategies should ensure that the PHC is given due emphasis at all levels of health care delivery as a core of the entire health system and a means to reach to the most needy segment of the population. The main Rational of conducting the envisioning exercise of the health sector now with the context of UHC through PHC approach includes:

- The PHC will remain the core of the health system to narrow the gaps of inequalities of varies kind, attain better level of health care and achieve Universal Health Coverage
- We need to ensure the gains made so far in the PHC particularly in the HEP sustained and address the coming health challenges as the result of the changing landscape
- The notion of good health is evolving, shifting towards creating and maintaining good health and well-being, rather than only preventing and treating cases. Health systems must adapt to higher expectations and new demographic, environmental, and health challenges[2]. Therefore, we need to envision a PHC that contribute to the overall health system to address the expectations of citizens and potential health related challenges.

[2] www.worldwewant2015.org/health/final report

- The current 20 year HSDP is in its final year and the need to design the coming twenty year plan is eminent

  One of the successes of the ending HSDP strategies is the focus towards the primary health care including the flagship community health platform called the Health Extension Program (HEP), expansion of health posts and health centers, massive production of lower and mid level health workers. While successes were registered in the last twenty years, gaps were observed in maintaining quality of care, producing and maintaining high level health workers, ensuring functional networking of PHC with hospital services and providing sound leadership and good governance at all level of health system particularly at district level. Hence, the MOH reviewed the progress made so far and gathered lessons from other countries to recommend strategic directions for a better PHC for the coming decades. The health system through PHC approach is expected to commensurate with the need of the people as the country progress into middle income country. Health promotion and disease prevention remain the heart of the health system with providing emphasis to curative, palliative and rehabilitative tasks to ensure continuum of quality care which is also optimizing secondary and tertiary level of care.

4.2 Purpose of the Document

The Ministry of Health seeks to achieve the health outcomes that commensurate with lower-middle income country by 2025 and middle-middle-income country by 2035. The purpose of this vision document is to define a framework for strategic action to enable Ethiopia to advance toward this objective. The visioning document focuses on Primary Health Care, as a critical element of a cost-effective health system, but addresses wider issues of secondary and tertiary care as well ensure a continuum of quality clinical care with strong linkage to the primary health care. The framework will be helpful in guiding the next health sector plans as well as points out some recommended approaches or strategic areas to be tested in the future.

4.3 Guiding principles

Several fundamental principles guided the strategic recommendations in this document and are expected to guide the coming health sector strategies:

- Equity across income, gender, ethnicity, geographical regions, people with special needs and lifestyles
- Community empowerment
- Efficient use of resources
- Accountability and transparency
- Innovation and use of technology
- Responsiveness to changing economic, social, environmental, technical and epidemiological content; adaptability, and sustainability
- Evidence based decision making
- Quality of care
- health as a key sector in development (health in all policies approach)

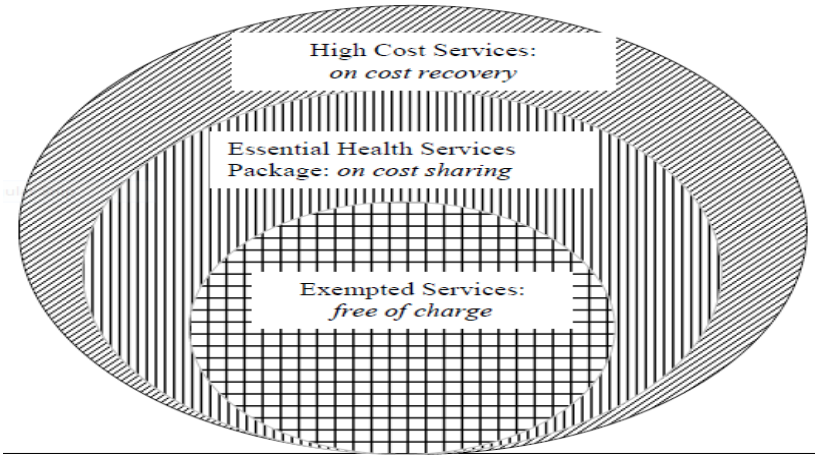
4.4 Primary Health Care as Ethiopia's Principal Means to Advance Towards UHC

Universal health coverage (UHC) is a direction for Ethiopia's health sector development. UHC has been defined as guaranteeing access to all necessary services for everyone in need while providing protection against financial risk.

Moving towards UHC requires progress along three related dimensions of health system development. First, determine the health service packages required to address the health needs of the people. Secondly, the services need to reach all in need of them and be adequately used by those in need. Third, mechanisms to pay for these services must be developed that protect those who need and use the services from facing significant financial risks from having to pay directly for services at their time of need. Striking a balance between all the above three dimension with due emphasis to quality and equity of the health services is crucial in defining the country specific UHC. Ethiopia has put in place significant efforts to advance along these dimensions. Ethiopia is delivering Essential Health Services Package (EHSP) through its Primary health care units, the first dimension. EHSP for Ethiopia was developed in 2005 to address major health conditions of the people under a district health system through establishing PHCU. Health posts, health centers and primary hospitals constitute primary health care units responsible to provide the EHSP to an average of 5000, 25,000 and 100,000 people respectively. The facilities are equipped and manned according to the standards set at each level. The health extension program is serving as a platform to link the community with the PHCU which is being further enhanced through networks of the Health Development Army (HDA). The coordinated effort of the above mentioned structures and respective functions under the district health offices is the principal means to achieving the desired service coverage, the second dimension. Huge investments are made in the PHC to reduce disparities in accessing essential health services. These efforts are expected to be consolidated and further enhanced through strengthening of PHCU and their linkage to higher level health care and complementary specialized services to improve quality of healthcare services.

Ethiopia is providing the EHSP on free of charge basis for exempted services, on cost sharing basis for non-exempted but Essential health services and on cost recovery basis for high cost services.

Figure 1: Schematic presentation of financial arrangement to avail EHSP



[3]

[3] Ethiopia's Essential Health service package , 2005

To further augment financial risk protection, health insurance schemes are established through the expansion of community-based health insurance and social health insurance. Expanding both service coverage and financial protection will emphasize equity in reaching the more disadvantaged people reducing disparities within Ethiopia's population.

Given the above three dimension and Ethiopia's effort so far, Ethiopia is in the right direction of UHC as demonstrated by improvements in the coverage of essential health services and slight improvement in out-of pocket expenditure in the National Health Accounts. However, further analysis is required on the extent of the out-of-pocket expenditure as opposed to disposable income of the people to learn how catastrophic the health expenditure is. Moreover, the essential health service packages need to revised and potentially expand as the health need of the community changes through time and the financial capacity of the country improves with the economic growth. The measures of UHC change according to the service package and financial situation in each strategic period. Hence, the UHC between now and 2035 will shift according to the shift in the burden of diseases, the demand for quality of life and financial landscape of the sector as Ethiopia advances towards middle income status. .

The vision towards UHC through primary health care developed in this document indicates that Ethiopia's first priority is for all Ethiopians to be able to receive a complete package of needed priority health services through an effective, equitable, and efficient health care system with primary health care approach. These services should be provided with a high degree of financial risk protection. This "primary health care" approach is the core of Ethiopia's strategy to move to UHC. The scope of services and financial risk protection will expand as Ethiopia's resources and capacities increase through the implementation of this vision. The vision towards UHC is to provide all segment of the population with essential health services as defined in each subsequent strategy plans. Mechanisms to address barriers to access these essential services including financial barriers need to be well crafted to narrow avoidable inequalities. Early initiation of such efforts of reducing disparities in all sectors is expected to minimize the effect of "middle income trap"[4].

4.5 Scope of the envisioning Document

This "envisioning" is not intended to be a detailed operational plan, but rather a setting of directions for further development and further analysis. It is an indicative investment plan which would lay out further input for development such as health facilities, human resources, and other essential inputs, and operational plans that would link these to realistic output and outcome targets and resource requirements should be developed – indeed this is what has been done in the previous "Health System Development Plans" (HSDPs) I-IV. This visioning is not a substitute for the five-year strategic or annual operational plans and therefore it does not provide specific actions or timetables. Rather, it lays out key strategic directions, which will form the basis for those planning processes. As with any dynamic process of planning for the future, both visioning and other plans

[4] A middle-income trap refers to a situation in which an MIC falls into economic stagnation and becomes unable to advance its economy to a high-income level for certain reasons specific to MICs.

should be flexible and adapt to future conditions while keeping to a clear direction. Hence, this document can be considered as the first version of the health sector strategic framework.

4.6 Assumptions in Developing Ethiopian health sector Strategic Recommendations

4.6.1 National plan of becoming a lower middle income country by 2025

The GoE aims at becoming a lower middle income country by 2025. Hence, the MOH assumed that most of the targets of the Ethiopian Growth Transformation Plan (GTP) would be achieved or reach to near target level by end of 2015. The performance observed in achieving the MDG targets will be maintained and even gets stronger to achieve targets set after MDG and commensurate with expected performances as lower-middle income country by 2025 and a well established middle-income country by 2035. Besides, the current situation and lessons learned so far as well as experiences of other countries are considered in the process of setting the strategic recommendations.

4.6.2 Health transition[5]

Ethiopia is getting more urbanized, globally connected and industrialized which will have impact on health. Climate change is also a concern that needs to be considered in the efforts of improving health. As the result, epidemiologic transitions are expected to be noticeable in the coming decades. The following are some of the factors considered in developing the long term health and health related strategies.

Epidemiologic transition: health systems in sub-Saharan Africa face challenges posed by health transition, i.e. a triple burden of communicable, non-communicable diseases (NCDs) and injuries. One of the challenges is how to man and equip the healthcare system to respond effectively to this triple burden.

Globalization: Globalization is a process in which countries and regions are becoming increasingly interconnected through the movement of people, goods, capital and ideas – a process that has both beneficial and harmful implications for health[1]. With rapidly increasing globalization and accompanying urbanization[2], trends towards unhealthy diets, obesity, sedentary lifestyles and unhealthy habits are resulting in an increased worldwide burden of chronic NCDs (e.g. diabetes, cardiovascular and lung diseases, cancer and psychiatric disorders) and their associated risk factors (e.g. smoking, alcohol, hypertension and obesity), that includes developing countries.

[5] **Health transition in Africa: practical policy proposals for primary care;** D Maher [a], L Smeeth [b] & J Sekajugo **http://www.who.int/bulletin/volumes/88/12/10-077891/en/** [c]

Urbanization: The current average annual growth of the urban population in sub-Saharan Africa is 4.5%[8] .Urbanization in sub-Saharan Africa, as well as in other less-developed parts of the world, is strongly associated with increased levels of obesity, diabetes and cardiovascular disease. Sub-Saharan Africa therefore faces particular challenges. **Industrialization**, extensive construction of buildings and infrastructures and road networking increases injuries from occupational hazards and road traffic accidents.

Industrialization[6]:

Industrialization refers to a process which has taken place in the history of all economically 'developed' countries and which remains a desire for most of the governments of least developed countries. Industrialization increases the production and trading of commodities at scale which entails a wide range of accompanying transformations in the social relations of work, trade, communications, consumptions and human settlement patterns and so, predictably, also implies intense cultural, ideological, environmental and political changes. These changes have a range of significant health implication. Two of the oldest relationship between economic activities and population health are recognized to be mediated through the epidemiological implication. First, regular social interaction between populations previously not exposed to each other's diseases ecology as well as exposure to changing environment, and secondly, the increasing dense permanent settlement of populations, which occur in the form of towns occupying nodal or strategic points in trading networks. Both of these relationships have always been understood to be negative, in terms of the health population exposed.

However, despite these well-understood, long-standing negative health risks associated with results of industrialization such as urbanization and trade, industrialization has in general been considered to have a much more positive relationship with human health. It is widely understood that industrialization was a necessary initiating historical process experienced by all today's 'successful', high per capita income societies. These are generally among the highest life expectancy at birth in the world today. This has been made possible by the advanced medical technology, better food supply, and increased material living standards as a result of the continuous process of economic growth they all experienced ever since industrialization. The apparent logical reference is that industrialization has improved human welfare and health.

The lessons of history in developed nations indicated that all economic exchanges entails health risks and that industrialization typically results in a particularly concentrated cocktails of such risks. However, understanding of the potential risks while undergoing transformational process of industrialization and taking appropriate mitigation measures avoids or significantly reduce undesirable diseases and deaths. Like the Swedish and British cases, extremely committed, well informed, well funded, developed and democratically responsive forms of local governments may be more important than the central state in effectively managing the immediate negative health consequences of industrialization. Ultimately, the redistributive resources and authority in a democratic society will undoubtedly become important in ensuring that long-term sustained economic growth continues to be a benefit to the health and welfare of the whole population, rather than merely a source of ever-increasing private wealth to a small proportion of individuals

[6] British Medical Bulletin 2004, Vol. 6;75 – 86

favored by birth and by chance, which is a tendency inherent in the normal working of unregulated, free market capitalism.

Climate change: the consequences of global climate change are likely to be most severe in developing countries, with the associated health risks increasing in vulnerable regions and poorly-resourced populations, even though these countries have contributed least to the problem.10

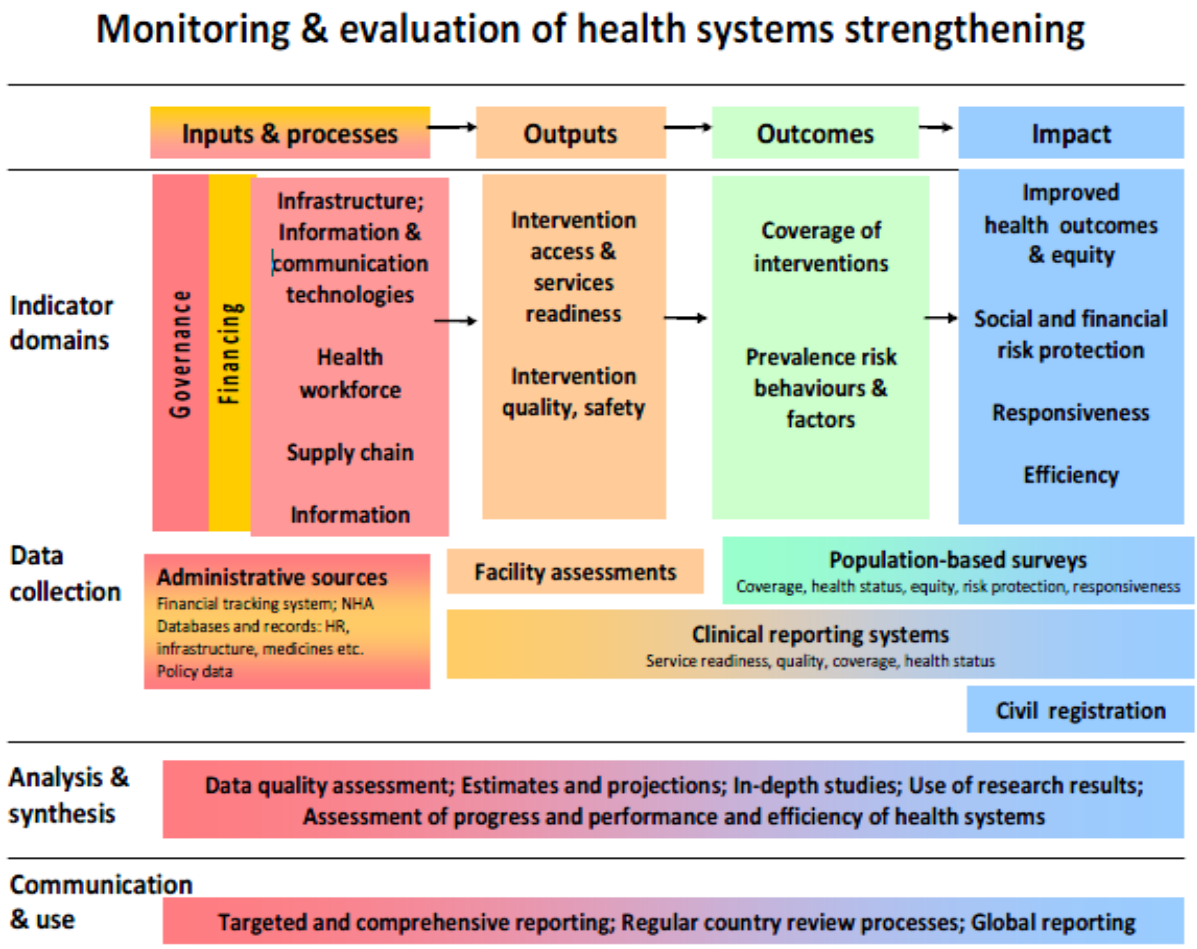
While all low- and middle-income regions face the challenge of NCDs as increasingly important health problems, sub-Saharan Africa faces the unique burden of increasing NCDs and of continuing high – and even increasing – morbidity and mortality from communicable diseases. An increasing disease burden arises from interactions between communicable diseases and NCDs, e.g. between tuberculosis and poor nutritional status, diabetes and infection (with diabetes predisposing to infections which often exacerbate hyperglycemia). Common NCDs arising from the current high burden of chronic communicable diseases in Africa include cervical cancer linked to human papilloma virus infection, hepatoma linked to hepatitis B virus infection and pharyngitis linked to Rheumatic Heart Disease. The burden of chronic NCDs is likely to be further uncovered as scaled-up programmes of antiretroviral treatment of HIV-infected people reduce mortality but increase morbidity related to chronic HIV infection and treatment. Increasing numbers of people in Africa are therefore at risk of possible metabolic side-effects resulting from life-long antiretroviral treatment,12 e.g. diabetes, lipodystrophy and dyslipidaemia. These overlaps between communicable diseases and NCDs present opportunities for synergistic care, strengthening the case for an improved Primary Health Care response with stronger referral and consultation network with higher level healthcare tiers.

5. Situational Assessment

5.1 Highlights of current & past situation

The general situational assessment of the health sector which mainly focuses on the performance evaluation of the twenty-year Health Sector Development Programme (HSDP) is organized using the WHO framework for monitoring and evaluation of health system strengthening (HSS). It is organized using the result chain starting with the health status of the population and health systems performance (impact and outcome), followed by performance of the health systems capacity which includes the outputs, processes and finally the inputs and processes (fig 1).

[7]**Figure 2: An operational Framework for Monitoring and Evaluation of health systems strengthening**



5.1.1 Situation analysis of Health Status– Impact Analysis

The impact analysis deals with some vital indicators such as mortality, morbidity and life expectancy as well as inequalities in impact whenever information is available. It mainly focuses with the progresses and challenges in achieving the health specific Millennium Development Goals and addressing other prominent health problems.

5.1.1.1 Child health

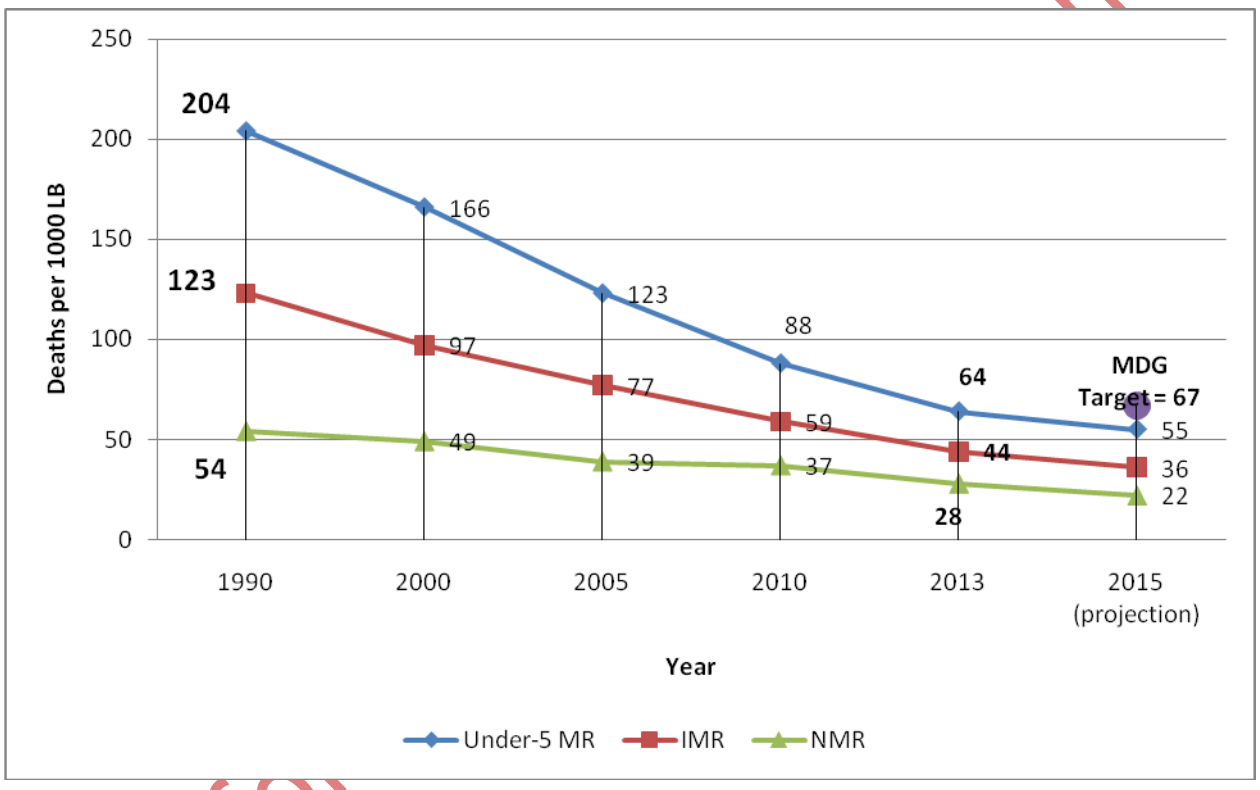
International and local reports exhibited improvement in health status of Ethiopians. According to the recent World Health Statistics Report published in 2014, Ethiopia has achieved MDG 4 three years earlier by reducing under-five mortality from 1990 estimate. The Proportion of children who were dying before their fifth birthday has declined to 64 in 2013 from 204 in 1990 among 1000 live births. However, there is also wide geographic variation in under-five mortality according to the EDHS 2011 ranging from as low as

[7] Monitoring and evaluation of health system strengthening: an operational framework; WHO, Geneva, Nov 2009. PP 1

53/1000 live births in Addis Ababa to as high as 169/1000 live births in Benishangul-Gumuz region. Similarly, significant variation is also observed among different socio-economic groups within the same geographic areas.

The UN Inter Agency Group on its 2013 mortality estimate reported that Ethiopia's under five, infant and neonatal mortality rates were 64, 44 and 28 per 1000 live births, respectively. The child mortality trends in Ethiopia show a steep decline; from 1990 to 2000 with the average annual reduction (ARR) of U5MR at 2%, but the reduction rate accelerated to 5% after 2000, bringing about a dramatic decrease in under five mortality rate to the current level of 64/1000 live births in 2013. Thus in August 2013 Ethiopia was declared to have achieved MDG 4. Figure 1 shows the trend in under-five, infant and child mortality since 1990.

Figure 3: Trends in under-five, infant and neonatal mortality rates and estimated levels for 2015 [8]



Notwithstanding the achievement observed in reduction of under-five mortality rates, close to 200,000 children are currently dying each year. Moreover, the reduction in mortality in neonatal age groups is not as impressive as that of childhood mortality. Disparities are significant among children from different socio-demographic strata and geographic regions of the country. There is strong association of newborn and child mortalities with wealth, maternal educational status, residence, maternal fertility characteristics and access to safe water and sanitation.

[8] *EDHS 2000, 2005 and 2011& IGME 2013 reports*

Figure 4: Mortality among children under age five year by place of residence, wealth of households and maternal educational status, EDHS 2011

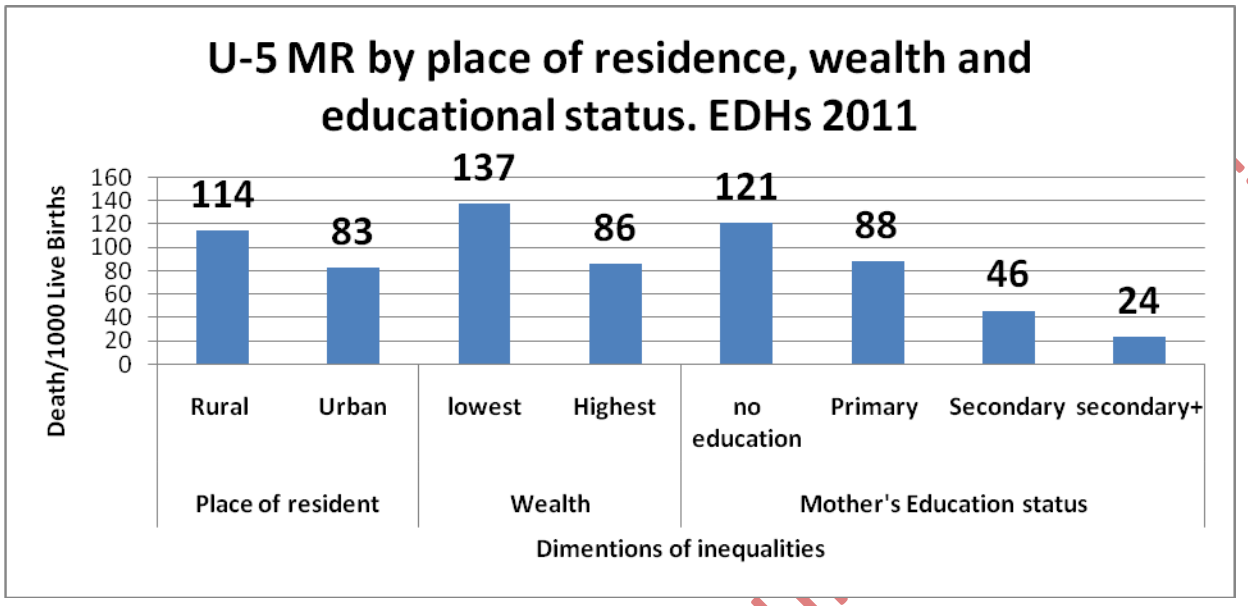
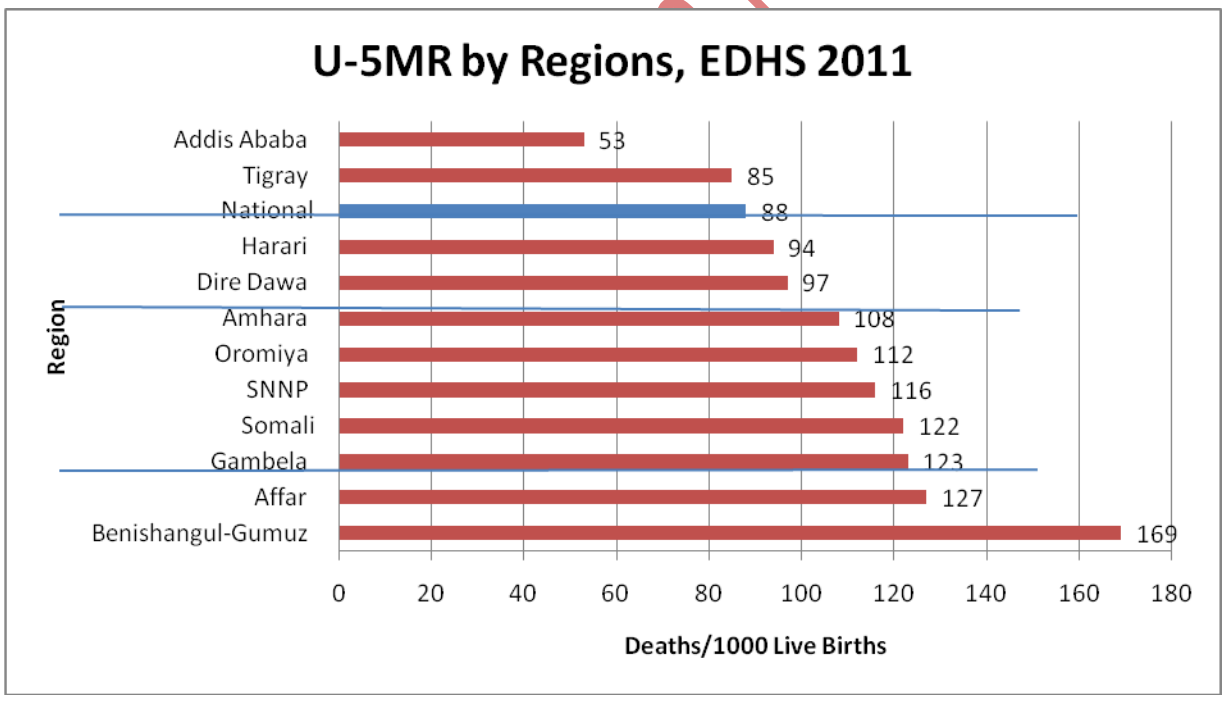


Figure 5: Mortality among children under age five year by region, EDHS 2011



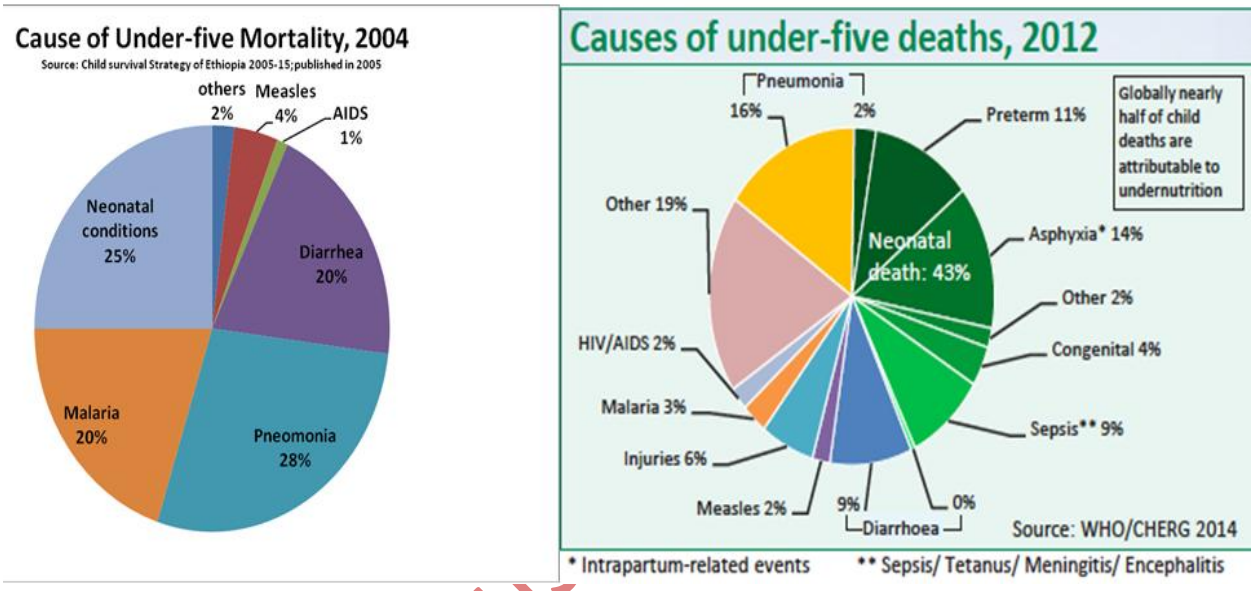
5.1.1.2 Neonatal Health

Regardless of Ethiopia's remarkable success in infant and under-5 mortality, the reduction in neonatal mortality is relatively low. EDHS 2011 reported the Neonatal Mortality Rate (NMR) as 37/1000 live births, which has not shown significant declines from the 2005 EDHS report of 39/1000 live births. According to the recent UN estimate, the neonatal mortality reduced by 48% from the 1990 estimate to 28 per 1000 live

births in 2013 while the reduction rate of under-five mortality rate was by about 67%. Prematurity (37%), infection (28%), and asphyxia (24%) are the most common causes of death in neonates[9].

The major causes of under five mortality, based on the 2014 WHO/CHERG estimates for Ethiopia (Figure 5), were acute respiratory infection (ARI) (18%), diarrhea (9%), prematurity (11%), sepsis (9%), birth asphyxia (14%), meningitis (6%), injury (6%), and measles (3%) and others (21%). Malnutrition is a major contributor to child mortality in Ethiopia being an underlying cause for nearly 50% of under-five deaths. Neonatal conditions which were causing a quarter of under-five death in 2004 have recently increased to 43% while death due to malaria, measles, HIV, diarrhea and pneumonia declined.

Figure 6: Comparison of causes of Under-five Mortality among Ethiopian children in 2004 and 2012



5.1.1.3 Maternal Health

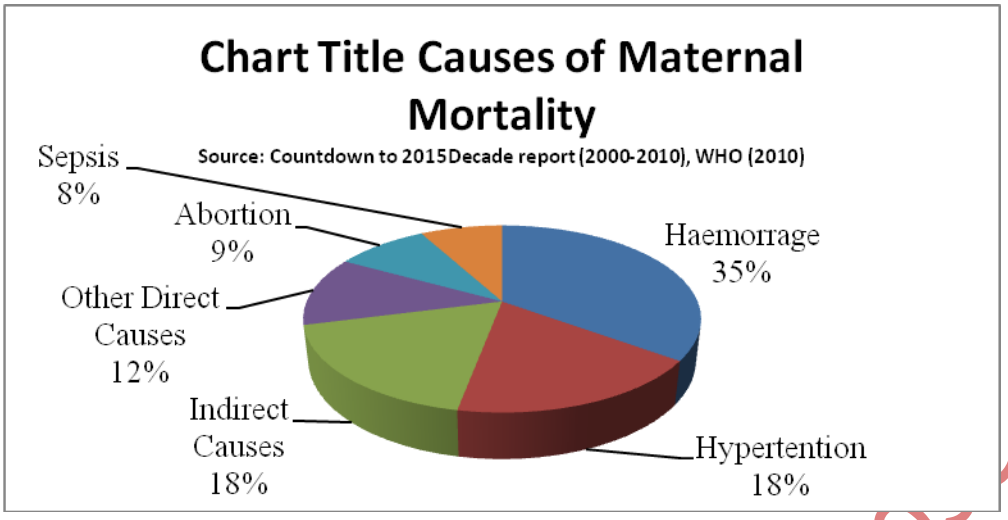
Good progress has been registered in maternal mortality reduction compared to 1990's estimate; a 69% reduction according to UN estimates. With annual reduction of 5% and more, it is expected that MDG 5 will be met by the end of HSDP IV (reduction by 75% by end of 2015 from 1990 estimate). According to recent UN estimate, proportion of mothers who were dying to give 100,000 live births has declined to 420 in 2013 from 1400 in 1990. However, EDHS 2005 and 2011 reported maternal mortality rate of 673 and 676 per 100,000 live births respectively indicating no change between the two surveys. Another report from Lancet estimated that maternal mortality was 497 in 2013[10]. Significant variation in estimating maternal mortality is observed in different studies calling for more robust and locally generated information. However, a reduction is observed in maternal mortality in all the studies with different magnitude of reduction.

Hemorrhage, hypertension in pregnancy, abortion and sepsis are among the causes of maternal deaths indicating the interventions to address them require institutional care.

[9] Liu L. et al. 2012. Global, regional, and national causes of child mortality in 2000–2010: an updated systematic analysis. The Lancet. doi:10.1016/S0140-6736(12)60560-1.

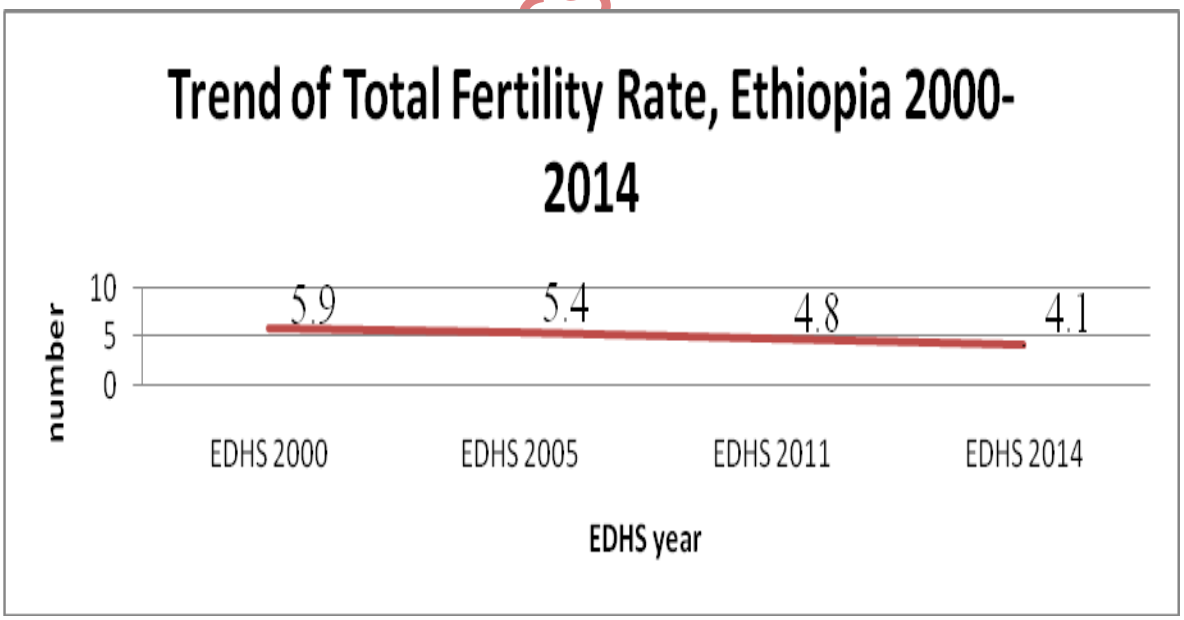
[10] www.thelancet.com **Published online May 2, 2014** http://dx.doi.org/10.1016/S0140-6736(14)60696-6 **(PP 12)**

Figure 7: Causes of maternal mortality



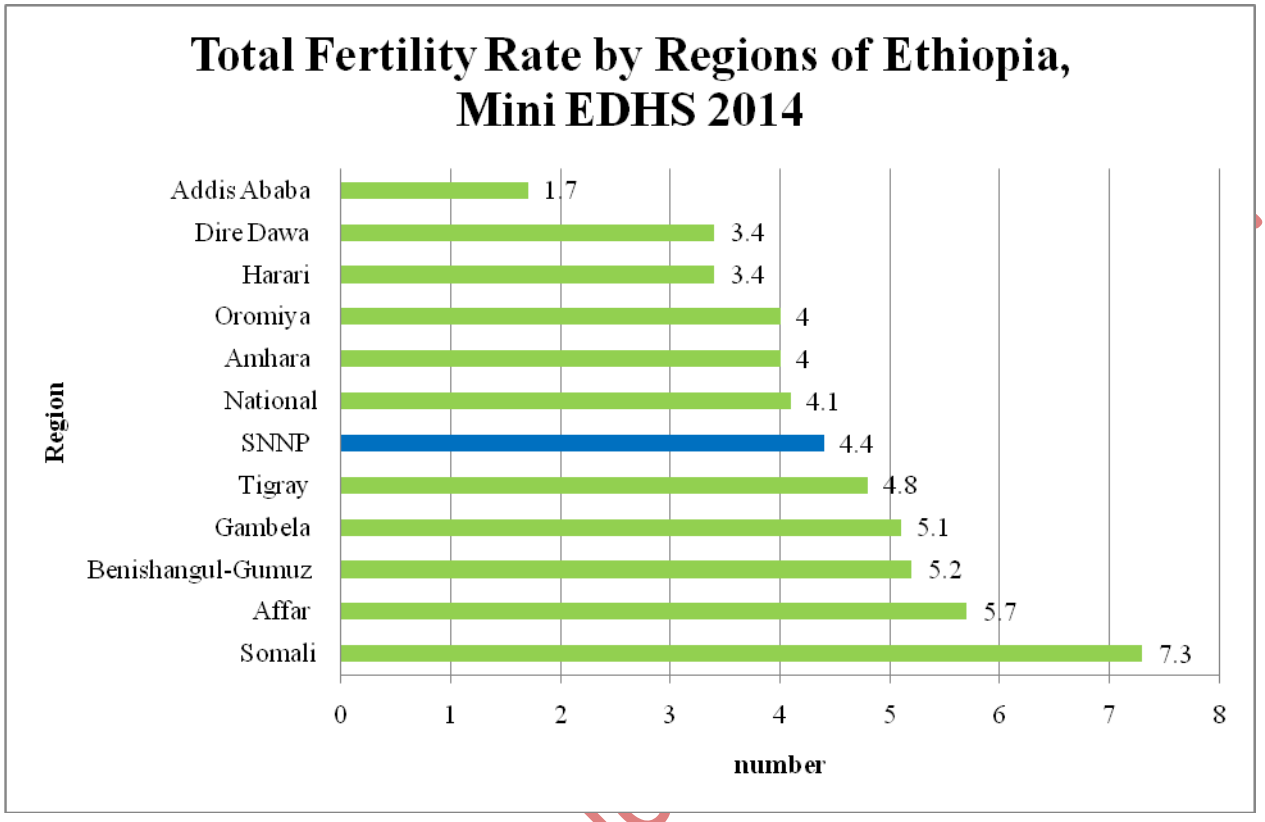
Bearing many children are among factors that affect maternal health status. Ethiopian women used to give birth to an average of more than 6 children in their life two decades ago (Total fertility rate). According to the recent Mini-EDHS 2014, the average total fertility among Ethiopian women has reduced to 4.1 with 2.2 in urban and 4.5 in rural areas. Hence, the objective of the national health policy[11] of reducing TFR to 4 by 2015 from 7.7in 1990's is achieved. There is also huge disparity among regions of Ethiopia from 7 in Somali region and 1.7 in Addis. The disparity is observed even among urban areas as a total fertility rate of 3.4, 3.4 and 1.7 in Dire Dawa, Harari and Addis Ababa.

Figure 8: Trend of Total Fertility among Ethiopian women



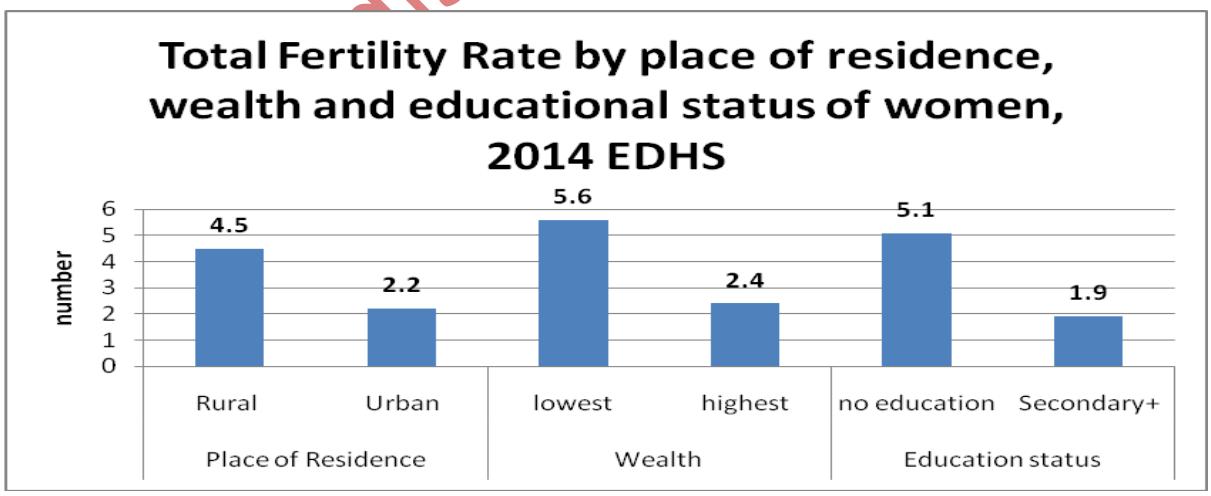
[11] National Population Policy of Ethiopia; April 1993.

Figure 9: Total Fertility of Ethiopian women by region



Noticable variation in total fertility rate was also observed among women because of their differnce in place of residence (urban vs rural), wealth and educational status. Women living in urban area, better off in wealth and education have small number of children in their lifetime.

Figure 10: Total Fertility Rate of Ethioian people by place of residence, wealth and education status



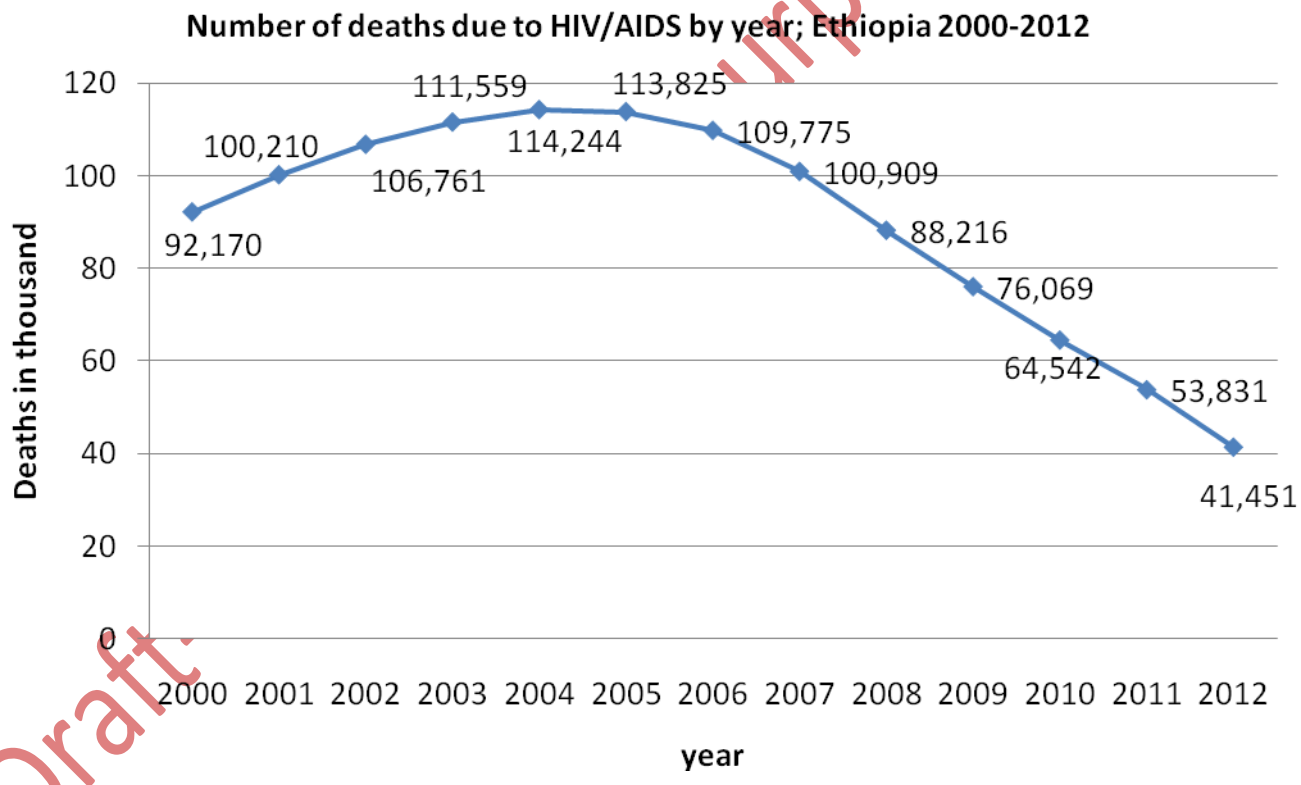
3.1.1.4 Major disease burdens

Mortality and morbidity due to HIV/AIDS, Tuberculosis and malaria (MDG 6) has reduced markedly. Death due to malaria has declined significantly. Major Malaria outbreak has not been witnessed for the last decade.

3.1.1.4.1 HIV/AIDS

HIV new infection has dropped by 90% and mortality cut by more than 50% among adults. Besides, Ethiopia is one of the few sub-Saharan African countries with "rapid decline" of HIV burden, with a reduction by 50% of new HIV infections among children between 2009 and 2012 (UNAIDS report 2013)[12].According to the "HIV related estimates and projections for Ethiopia-2012" published by FMOH and Ethiopian Health and Nutrition Research Institute (EHNRI), the adult HIV prevalence is estimated at 1.2% (0.8% in males and 1.6% in females) and the adult HIV incidence at 0.03% in 2014[4]. Annual rate of AIDS related deaths has declined from 92,170 deaths in 2002 to 64, 542 in 2012. Empirical data from the AIDS Mortality Surveillance study shows steady decline in AIDS related mortality from 2001 to 2009. HIV-related deaths among men declined from 41% (2001) to 11% (2009); and from 51% (2001) to 14% (2009) among women. [13]

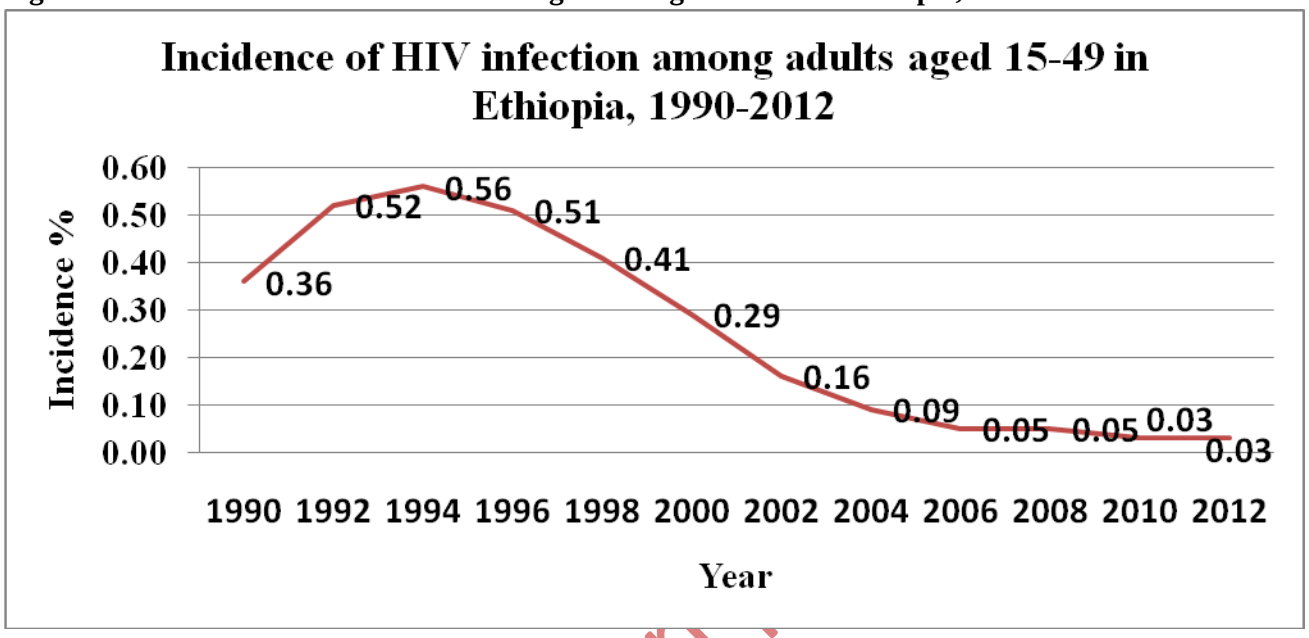
Figure 11: Estimated Number of Deaths due to HIV/AIDS in Ethiopia 2000-2012



[12] HSDP IV Annual Performance Report of 2006 EFY (2013/14), MOH: pp XII, 30

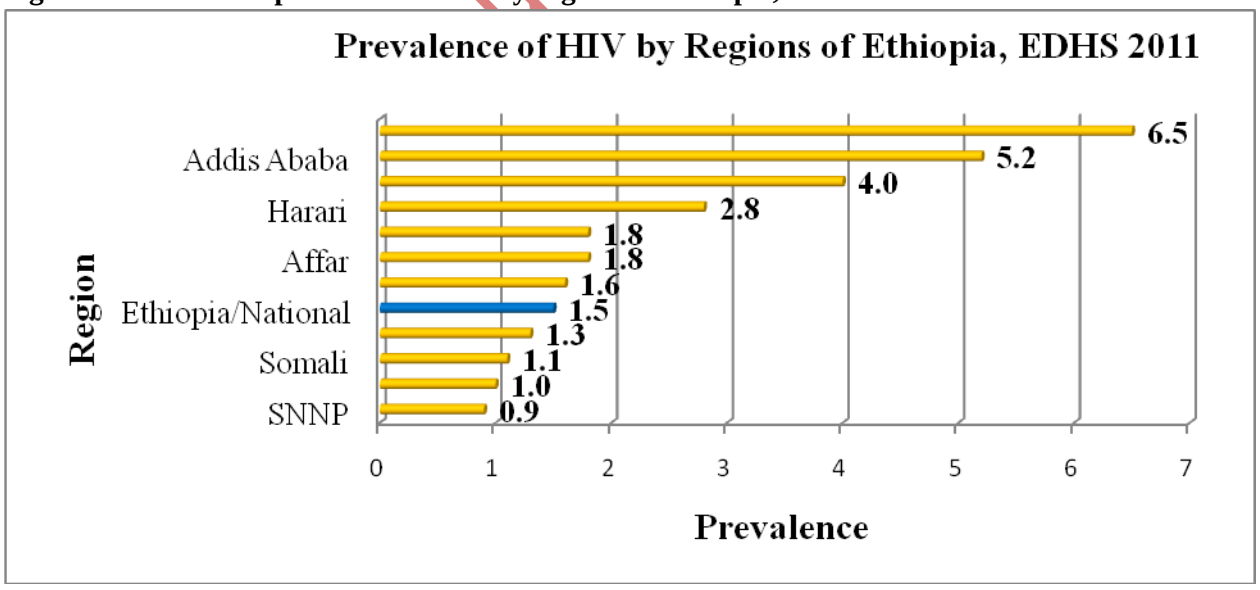
As can be seen from Figure 10 above and Figure 11 below, new infection and death due to HIV have drop substantially. The mortality and incidence rates have dropped by about two-third from the year 2004 when by high number of deaths were estimated to happen and followed by initiation of ART program in 2005.

Figure 12: Incidence of HIV infection among adults aged 15 – 49 in Ethiopia, 1990 – 2012



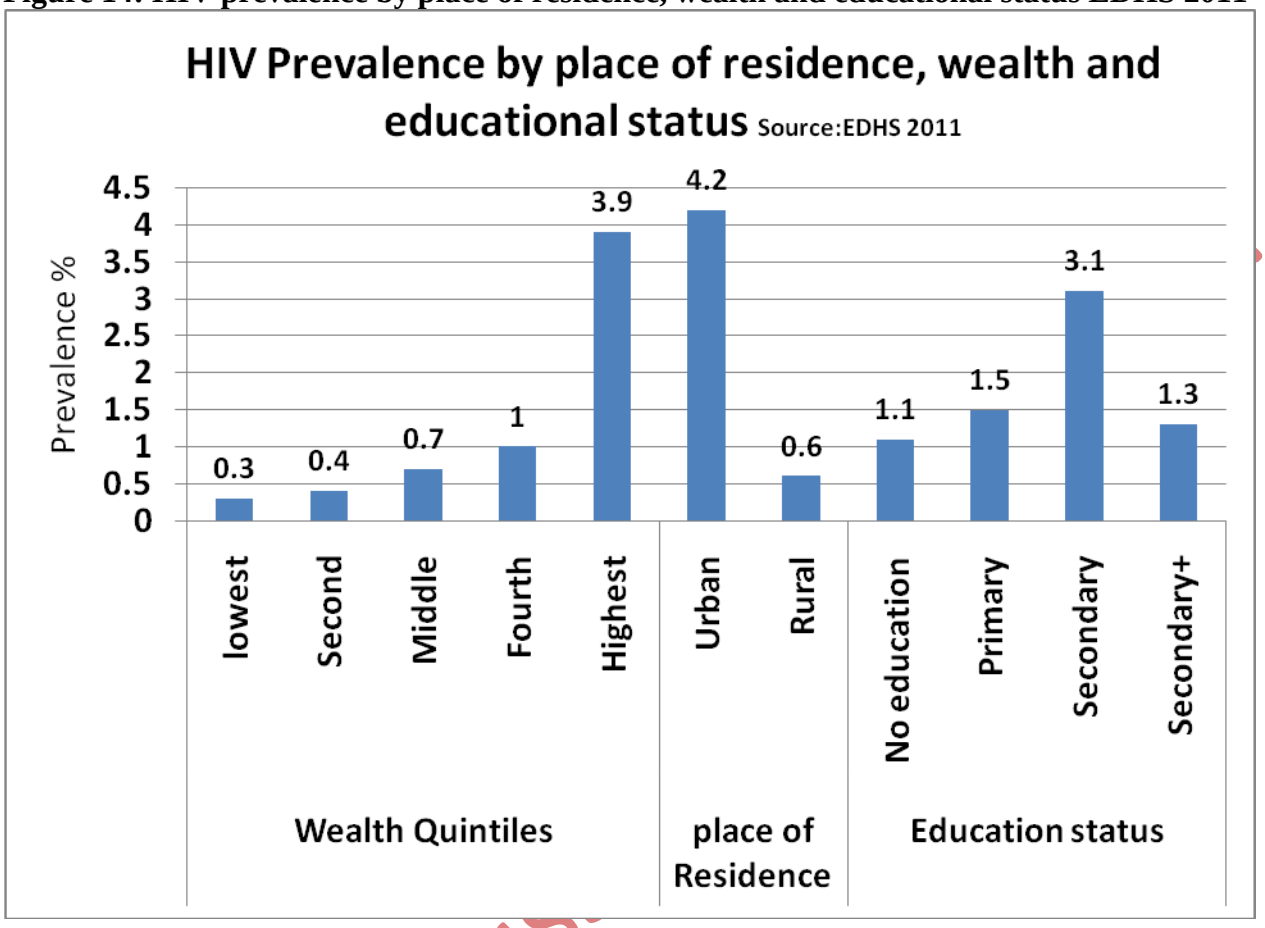
Though the incidence and prevalence rates have shown a declining trend, there are more than 750,000 people living with HIV/AIDS. Moreover, HIV prevalence is still very high in some of the regions and periurban areas of Ethiopia and there are people with most high risk behaviour.

Figure 13: Estimated prealence of HIV by regions of Ethiopia, EDHS 2011



The HIV prevalence is relatively higher among residents of urban areas and better offs in wealth and education.

Figure 14: HIV prevalence by place of residence, wealth and educational status EDHS 2011



3.1.1.4.2 TB

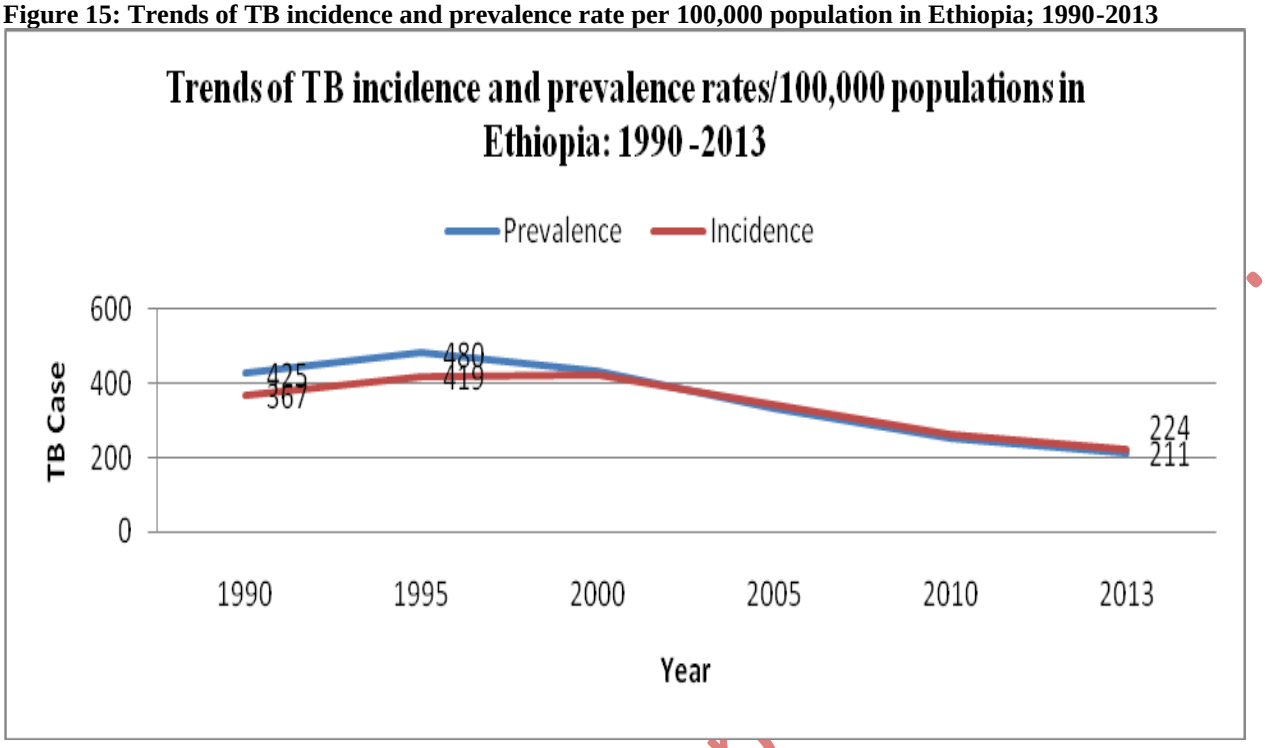
According to the 2014 WHO's global TB report, Ethiopia has achieved all the three targets set for tuberculosis prevention and control. Mortality and prevalence due to Tuberculosis has declined by more than 50% and incidence rate is falling significantly[14]. The decline in mortality was profound since 2005 on wards partly due to TB/HIV collaborative activities including initiation of ART service for free.

The estimates of TB incidence rate have shown a steady decline at an average rate of 3.6% per year since 2000 with an increased rate of decline for the last 5 years (5.5% per year) while Worldwide TB incidence fell at an average rate of about 1.5%[15] per year between 2000 and 2013. The estimated TB prevalence had reached 482 per 100,000 populations in 1984 mainly due to a rise in HIV infection in Ethiopia. It is now lowered to 237 TB cases/100,000 populations in 2014.

[14] Global TB report, WHO 2014: pp 50(Table 3.1)

[15] Global TB Report, WHO 2014: PP 13

Figure 15: Trends of TB incidence and prevalence rate per 100,000 population in Ethiopia; 1990-2013



According to the WHO's global TB report of 2014, HIV prevalence in incident TB cases (TB/HIV co-infection rate) is about 11% which is less than the global and African average of 13 and 34 respectively[16].

EPHI's report in 2014 on Second Round Anti-tuberculosis Drug Resistance Surveillance in Ethiopia revealed that prevalence of MDR TB was 2.3% (95%CI 1.5-3.1%) in new cases and 17.8% (95% CI 13.2-22.4%) in previously treated patients[17]. The prevalence of MDR TB cases has increased compared to the first antiTB drug resistance surveillance conducted nationwide in 2005 with a prevalence of 1.6% among newly diagnosed TB cases and 11.8% in previously treated TB cases. The rise in prevalence coupled with low detection of MDR TB cases is huge concern to the health sector given the socioeconomic impact it might create if not curbed timely.

Tuberculosis is remaining a huge burden as Ethiopia is among the 22 Tuberculosis, 27 MDR TB and 41 TB/HIV high burden countries.

3.1.1.4.3 Malaria

Close to 70% of Ethiopian population is at risk of malaria. Frequent focal and cyclical epidemics with intervals of 5-8 years are historically observed since 1958 when an estimated 150,000 people died during a widespread epidemic of malaria in the highlands[18]. Several major epidemics have been reported since then. Abnormal transmission with unusual proportions of the highlands and highland-fringe areas were affected in

[16] Global TB Report, WHO 2014, PP 32

[17] Second Round Anti-tuberculosis Drug Resistance Surveillance in Ethiopia, EPHI 2014. PP 40

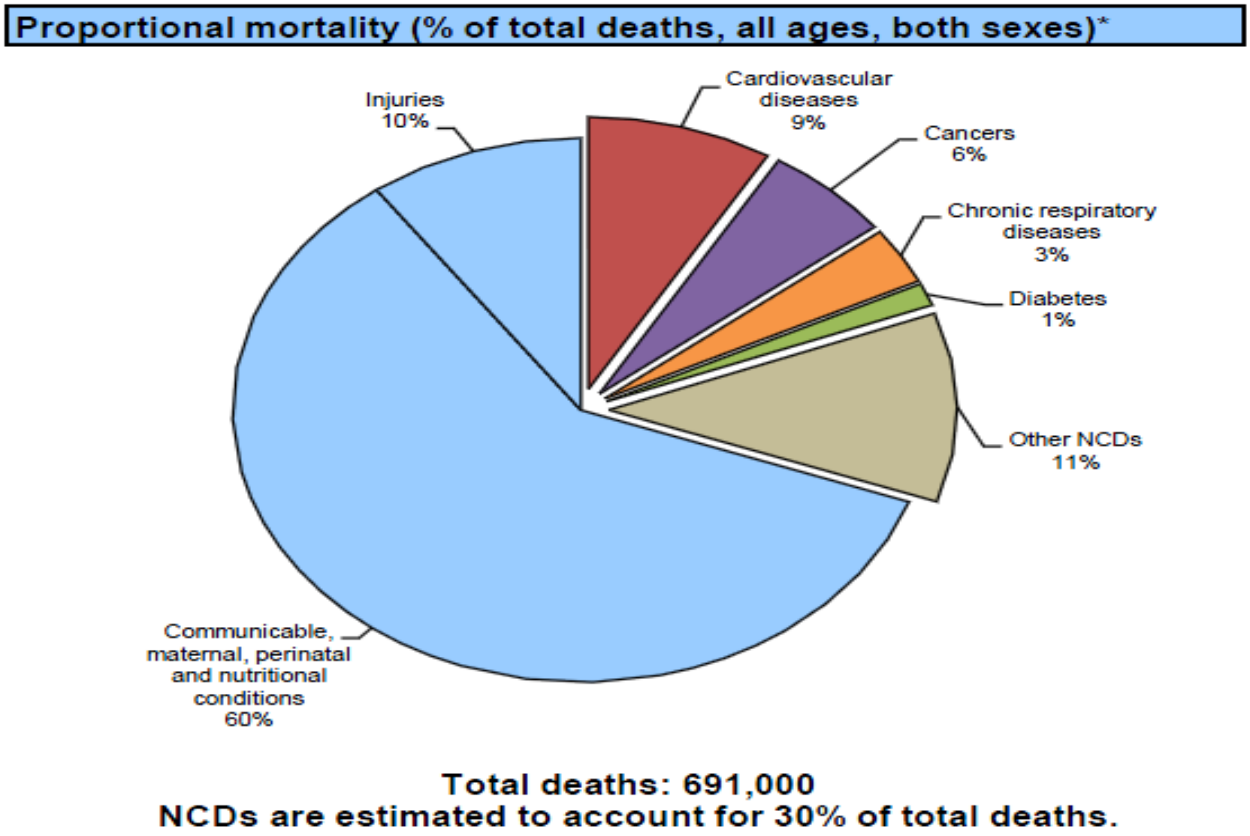
[18] Fontaine, RE, Najjar, A E and Prince, J S. The 1958 malaria epidemic in Ethiopia. American Journal of Tropical Medicine and Hygiene 10, 795–803, 1961.

1988 and 1991–92, which was associated with abnormally increased minimum temperature[19]. In 1997-1998, widespread epidemics occurred in the highlands and in the most recent national scale epidemic in 2003-2004, more than 2 million clinical malaria cases were reported[20]. Since 2003/2004, no major epidemics reported in the country. Besides, Malaria admission rates are projected to decrease by 50–75% by 2015 in Ethiopia based on a study in 41 hospitals[21].

3.1.1.4.4 NCD

According to the World Health Organization-NCD country profile of 2014, NCDs are estimated to account for 30% of deaths in Ethiopia. In this report, cardiovascular diseases accounted for 9%, cancers for 6% and respiratory disease for 3% of all causes of death. Furthermore, diabetes accounted for 1%, injuries for 10% and other NCDs for 11% of causes of deaths in the same year[22].

Figure 16: Proportion of estimated mortality of all age and both sex



[19] Abeku, TA, Van Oortmarssen, GJ, Borsboom, G, De Vlas, SJ and Habbema, JDF. Spatial and temporal variations of malaria epidemic risk in Ethiopia: factors involved and implications. Acta Tropica 87, 331–340, 2003.

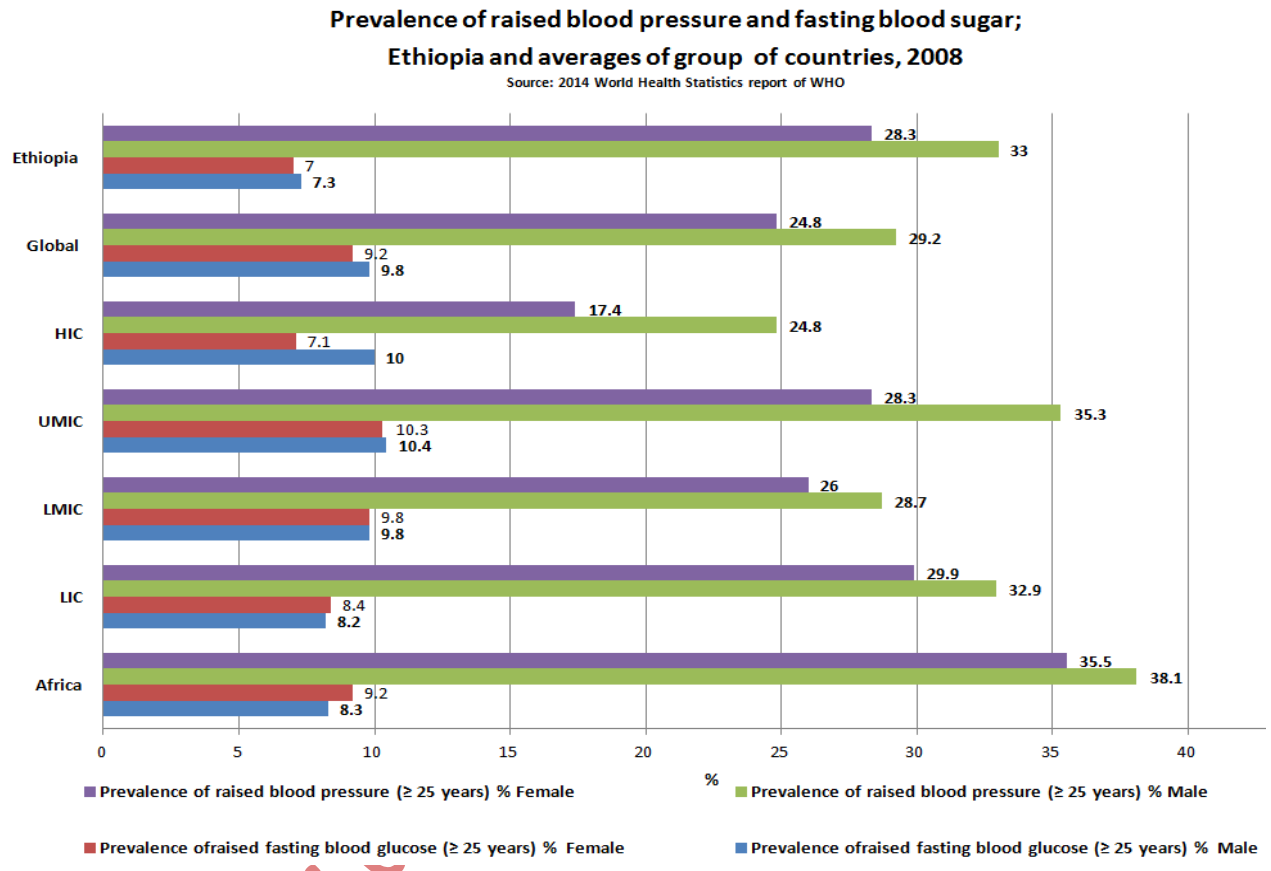
[20] K. Negash et al., Malaria epidemics in highland of Ethiopia. East Afr Med J. 82, 186-192 (2005).

[21] World Malaria Report 2014, W/HO. PP 50

[22] World Health Organization - Noncommunicable Diseases (NCD) Country profiles, 2014.

Besides, the estimated prevalence of raised fasting blood glucose and blood pressure levels among Ethiopians is almost similar to the rest of the world.

Figure 17: Estimated prevalence of raised blood pressure and fasting sugar in Ethiopia compared to averages of group of countries, 2008 (Source: 2014 World Health Statistics report)

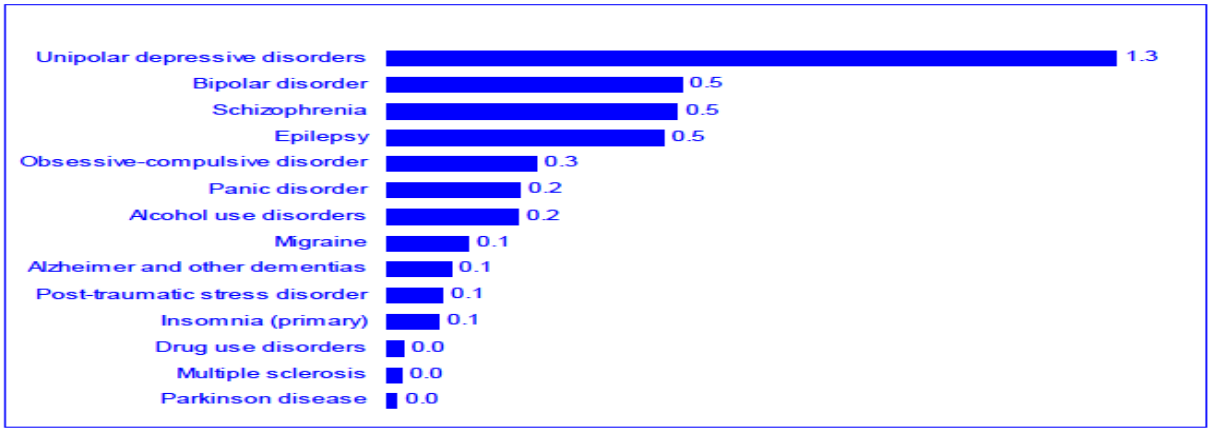


5.1.1.1 3.1.4.5 Mental Health

In Ethiopia, mental illness is the leading non-communicable disorder in terms of burden. Indeed, in a predominantly rural area of Ethiopia, mental illness comprised 11% of the total burden of disease, with schizophrenia and depression included in the top ten most burdensome conditions[23]. According to the 2010 report of the Ethiopia mhGAP working group, childhood mental illnesses and depression are among the leading mental health burden of the health sector with prevalence rates of 12-25% and 5% respectively. Moreover, problems related to alcohol and substance use, epilepsy, schizophrenia and bipolar disorder affect 0.5 to 1.5% of the population. These conditions are the main contributors for compromising quality of life and productivity as evidenced by the WHO 2010 report (see graph below).

[23] National Mental Health strategy 2012/13-2015/16, FMOH

Figure 18: Distribution of causes of neuropsychiatric burden of diseases (% of total DALYs) in Ethiopia, 2004 (graph from WHO, 2010b)

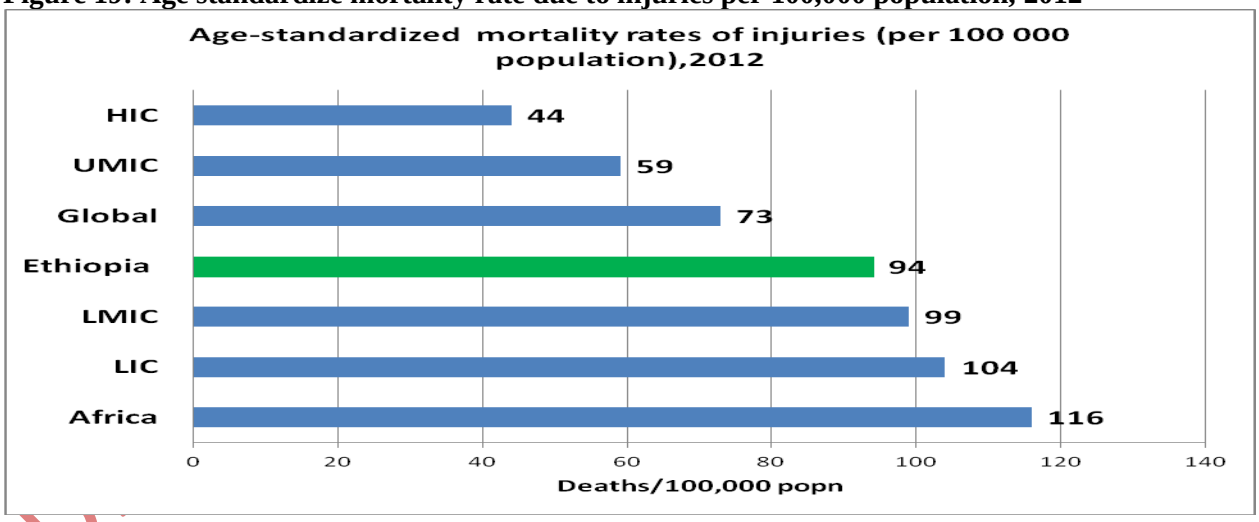


3.1.1.4.6 Injuries

According to the 2013 WHO's Global Status Report on Road Safety, Ethiopia has reported 2581 fatalities with 377,943 registered vehicles[24]. The report estimated that there are 17.6 estimated road traffic deaths per 100 000 population translating to more than 15,000 road traffic deaths annually. Moreover, less than 10% of seriously injured transported by ambulance and 5.5% are permanently disabled due to road traffic crash.

World Health Organization estimated homicidal rate per 100,000 populations to be 8 in its 2014 global status report on homicidal prevention (> 7000 deaths annually)[25].

Figure 19: Age standardize mortality rate due to injuries per 100,000 population, 2012



[24] Global Status Report on Road Safety, WHO 2013. PP 109, 246 & 253

[25] Global Status Report on homicidal prevention, WHO 2014. PP 232

3.1.1.4.7 NTDs

Though most of the interventions made through HEP on environmental health, personal hygiene and sanitations well as campaigns of mass drug administration were conducted in the last decade, a sizable number of people are still being affected with neglected tropical diseases. Ethiopia is among the high burden countries mainly for trachoma, podoconiosis, leishmaniasis, schistosomiasis and soil transmitted helminthiasis. Eight of the seventeen neglected tropical diseases including Onchocerciais, Lymphatic Filariasis and Dracunculiasis are relatively common or are on the verge of elimination in Ethiopia.

The country is among four countries in the world struggling to eradicate Dracunculiasis. WHO has so far declared a total of 198 countries, territories and areas (belonging to 186 Member States) as free of dracunculiasis transmission26. Only four countries remain endemic (Chad, Ethiopia, Mali and South Sudan) compared with 20 countries in 199027. A total of 7 cases from five villages in three woredas in Gambella Region were reported in 2013[28] and 3 cases reported in 2014 in the same region. A lot has been achieved since the implementation of a comprehensive intervention package after 99 endemic localities of 7 woredas (6 Woredas from Gambella and one Woreda from South Omo) identified during the national active case search of 1993-94. The number of reported Dracunculiasis cases has steadily declined since then. Indigenous transmission has been interrupted in South Omo since 2001, but transmission still occurs in Gambella.

Trachoma (blindness) is one of the major health problems in Ethiopia being a leading cause of blindness. 2010 According to the 2010 WHO World Health Report, roughly half of the global burden of active trachoma is concentrated in five countries (i.e. Ethiopia, Guinea, India, Nigeria and Sudan) and that of Trachomatous Trichiasis (TT) in four countries (i.e. China, Ethiopia, Nigeria and Sudan. The national survey conducted in 2006 has shown that the prevalence of blindness and low vision in the country is among the highest in sub-Saharan Africa (1.6% and 3.7%, respectively). The average prevalence of active trachoma throughout Ethiopia was 40.1%.When disaggregated by regional states, Amhara had the highest prevalence of 62.6% followed by Oromia at 41.3% and SNNPR, Tigray, Somali and Gambella with rates of 33.2%, 26.5%, 22.6% and 19.1%, respectively. Though occurring at a lower level, the disease is also prevalent in all other regional states[29].

The total population at risk of Onchocerciasis is estimated to be 10 million and about 8 million people live in hyper- and meso-endemic areas. The country is speeding up the move from control program to elimination. Parts of five regional states (i.e. Amhara, Oromia, Benishangul-Gumuz, Southern Nations Nationalities and Peoples, and Gambella) are known to be endemic for onchocerciasis[16].

Though there have been no national surveys on schistosomiasis, estimated 4 million people are infected and 30 million people are at risk of infection.

Soil transmitted helminthes (STHs), i.e. Ascaris lumbricoides, Trichuris trichiura and hookworms, are widespread in Ethiopia but with prevalence rates varying considerably between geographical areas. Prevalence is lowest in the lowland and dry areas of the country but higher in the more humid highlands.A

[26] http://www.who.int/dracunculiasis/Ghana_free_of_dracunculiasis/en/ accessed on 19th Feb 2015

[27] http://www.who.int/dracunculiasis/en/ accessed on 19th Feb 2015

[28] http://www.who.int/dracunculiasis/ethiopia/en/# accessed on 19th Feb 2015

[29] National Master Plan for NTDs (2013-15), FMOH. PP 8-15

national school health and nutrition survey done in 2005-2006 revealed that 23.2% of school children were infected with A. lumbricoides, 7.4% by T. trichiura and 9.1% by hookworms. The overall national prevalence of any helminth infection was 29.8% with variable degree of prevalence among regions, whereby SNNP (51%) and Gambella (51%) have the highest prevalence[16]. Moreover, about 30 million people are at risk of lymphatic filariasis infection.

Ethiopia is one of the high disease burden countries for leishmaniasis. Visceral leishmaniasis (VL), the fatal form of the disease, is endemic in 5 administrative regional states of Ethiopia. It is highly endemic in the arid lowlands of Amhara and Tigray regions (FMoH/WHO report, 2010). In addition, Somali, SNNP and Oromia regions are also affected. The annual incidence of VL in Ethiopia is estimated to be about 2,500 to 4,000 cases – all caused by Leishmania donovani[16].

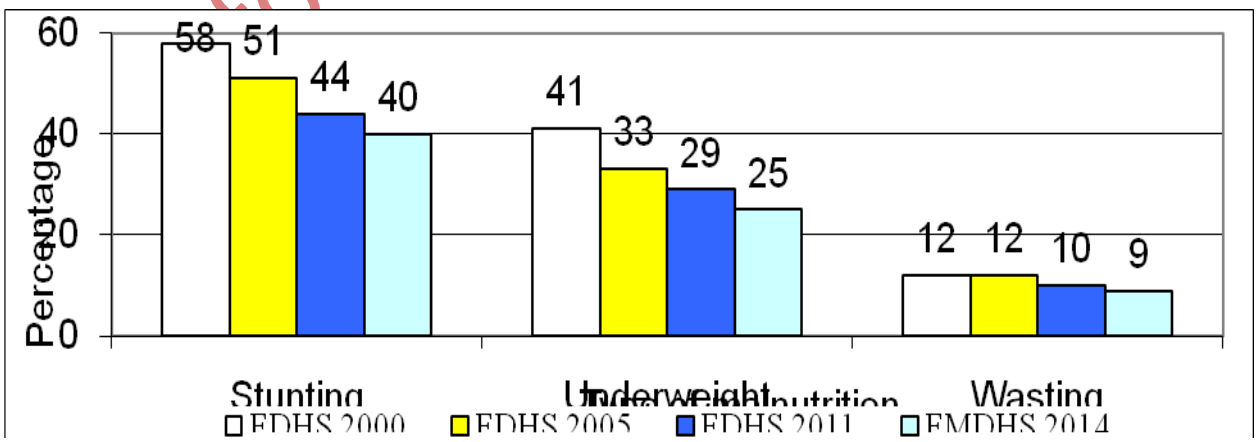
It is estimated that up to 1 million cases of podoconiosis (i.e. 25% of the global total case load) exist in Ethiopia. The disease occurs in highland red clay soil areas, mainly among poor, bare footed rural communities, whose members do not wear protective shoes and/or wash the dust off their feet using soap and water. The 'at-risk' population for podoconiosis is made up of all the people who live and farm on irritant soil. The soil is estimated to cover 18% of the surface area of Ethiopia, on which estimated 22–25% of Ethiopia's population (19.3 million) lives. In endemic areas of Ethiopia, the prevalence of podoconiosis is high ranging between 2.8% – 9.1%.

3.1.1.5 Nutrition

Nutrition is a crosscutting issue that contributes to achievement or acceleration of progress towards several MDGs. Ethiopia has the highest rate of malnutrition in Sub-Saharan Africa, and faces acute and chronic Malnutrition and micronutrient deficiencies. Nutrition deficiencies during the first critical 1,000 days (pregnancy to 2 years) put a child at risk of being stunted. This affects 40% of children in Ethiopia (Mini DHS 2014) and has lifetime consequences including illness and/or death; for those who survive, there is an impact on both physical and cognitive development impacting in the long term on work productivity and thus the economy.

Nutritional status of the population especially mothers and children are getting improvements. As it is confirmed with the consecutive EDHS results, there is decline in stunting, underweight and wasting in children under five years of age. However, stunting rate of 40% remain a great concern given life course impact of malnutrition on health of individuals and the socioeconomic development of the nation.

Figure 20: Trend of nutritional status among Ethiopian children (EDHS 2000, 2005, 2011 and 2014)



Twenty-seven percent of women age 15-49 are thin, that is, they fall below the cut-off of 18.5 for the body mass index (BMI), and 9 percent are moderately or severely thin. Only 6 percent of women are overweight or obese (BMI ≥25 kg/m2).

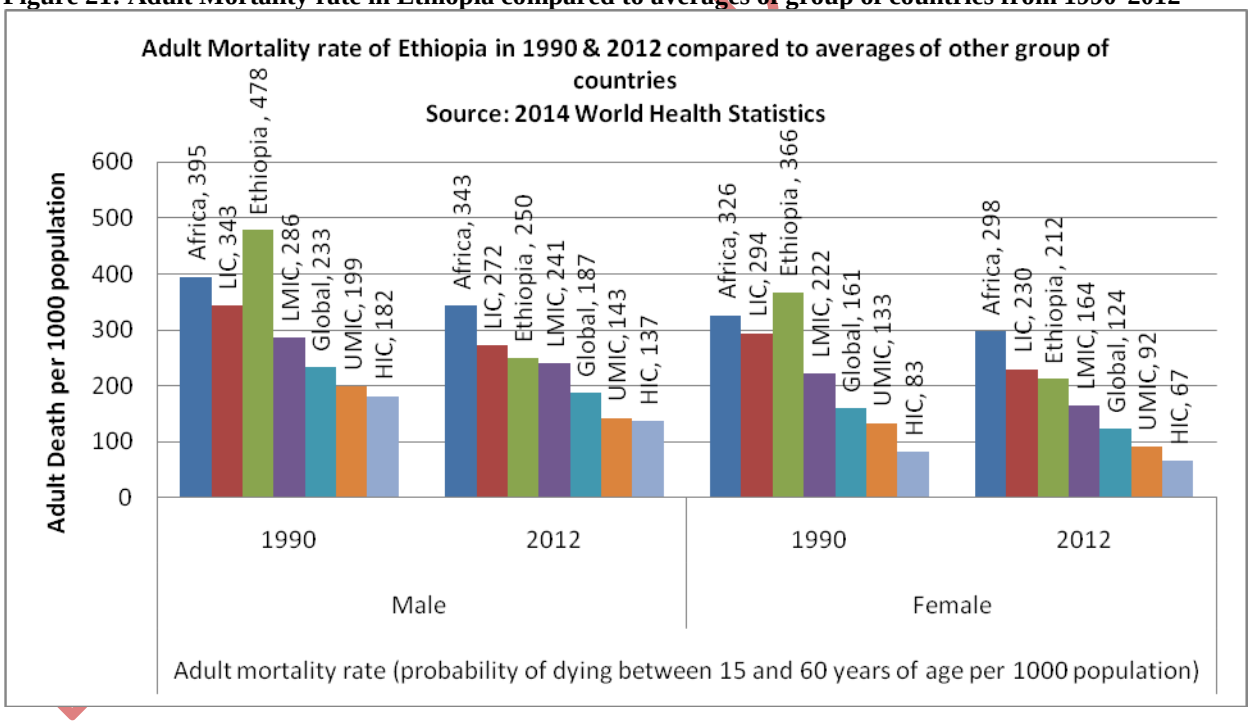
Micronutrient deficiency is another concern particularly in children. Vitamin A deficiency (VAD) is a severe public health problem in Ethiopia affecting around 61% of children 6-59 months of age in the 11 regions of the country (DHS, 2005). Clinically overt vitamin A deficiency can lead to childhood blindness if left untreated. VAD is likely one major contributing factor to the high under-five mortality rate of Ethiopia.

The prevalence of any anemia among Ethiopian women aged 15 – 49 years has declined from 27% in 2005 to 17% in 2011, a decrease of 37%. The prevalence of mild and moderate anemia also has declined between the two DHS surveys, from 17% to 13%, and from 8% to 3%, respectively. Forty-four percent of children ages 6-59 months are anemic, with 21 percent mildly anemic, 20 percent moderately anemic, and 3 percent severely anemic (EDHS, 2011). Iodine deficiency disorder (IDD) is among micronutrient deficiencies in Ethiopia.

5.1.6 Adulthood mortality

The probability of dying between 15-60 years of age per 100,000 populations (Adult mortality rate) has decreased by more than 42% in females and 47% in men from the 1990's estimate (World Health Statistics 2014).

Figure 21: Adult Mortality rate in Ethiopia compared to averages of group of countries from 1990-2012



5.1.1.7 Demographic shift

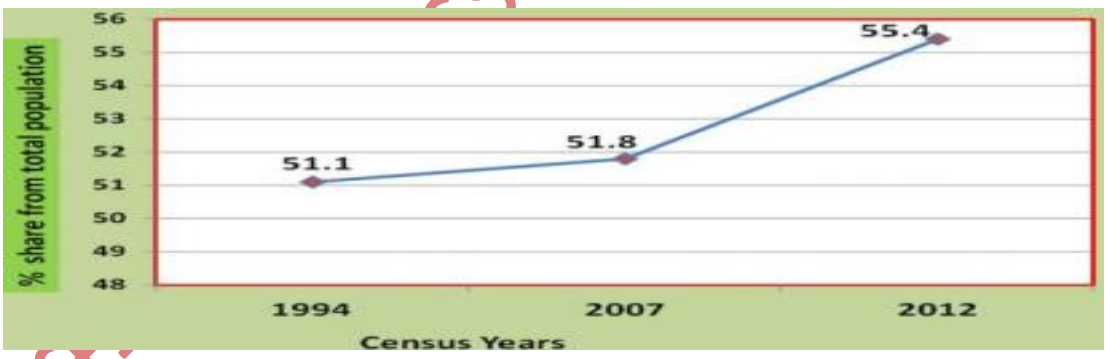
As a result of Ethiopia's commitment to reducing infant and child mortality, improving reproductive health and family planning, and the subsequent fertility decline, Ethiopia is on the right path to a population age structure that may enable a demographic dividend.

The total dependency rates of Ethiopia were 94.6, 92.9 and 80.6 percent in 1994, 2007 and 2012, respectively. Breaking this in to young and old dependencies one can observe from the three censuses conducted that the young dependency rates were 88.4, 86.8 and 75 percents in 1994,2007 and 2012, respectively, while the old dependency rates were 6.2, 6.1 and 5.6, respectively in the above census years. All the three dependency rates showed declining trend from 1994 to 2012 (Fig. 23). Fig. 24 Trends in National Age Dependency Rates of Ethiopia by census Years Source: CSA, Reports of the 1994 and 2007 Population

Figure 22: Trends in National Age Dependency Rates of Ethiopia by census Years[30]

The trend in the size of the working age population of the country showed progressive increase between the three previous censuses the country conducted so far. It has shown a 0.7 percentage point increase between 1994 and 2007 and a 3.6 percentage points increase between 2007 and 2012.

Figure **23: Trends in the Proportion of working age population at of Ethiopia (1994-2012)**



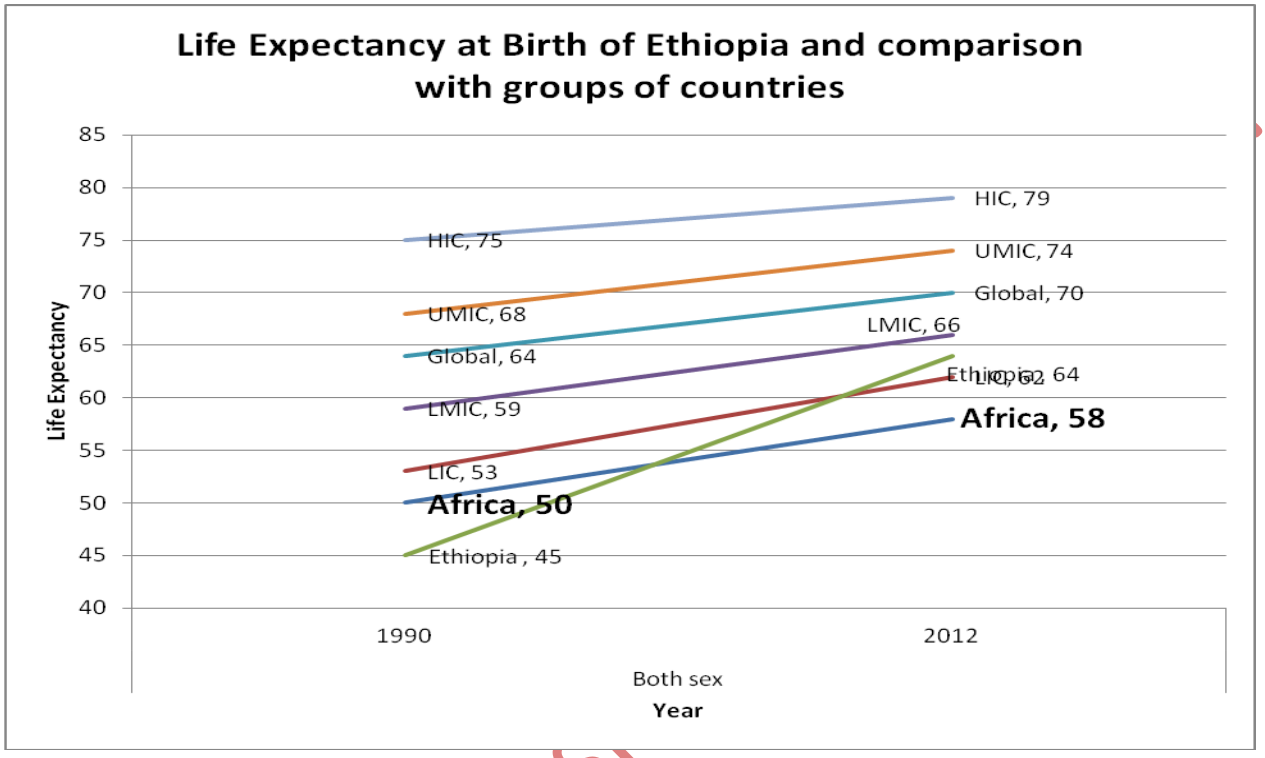
5.1.1.8 Life Expectancy

As the result of the above mentioned progresses mainly due to the remarkable reduction in child mortality and health promotion efforts in the health sector coupled with improvement in other socioeconomic sectors (social determinants of health), Ethiopians has began to live longer as evidenced by the improvement with the estimated average life expectancy at birth to 64 years from that of 45 in 1990. Therefore, children born in

[30] POPULATION STABILISATION REPORT Ethiopia, March 2014. PP:13,16 (http://populationcommunication.com/wp-content/uploads/2014/06/POPULATION_STABILISATION_REPORT-ETHIOPIA.pdf)

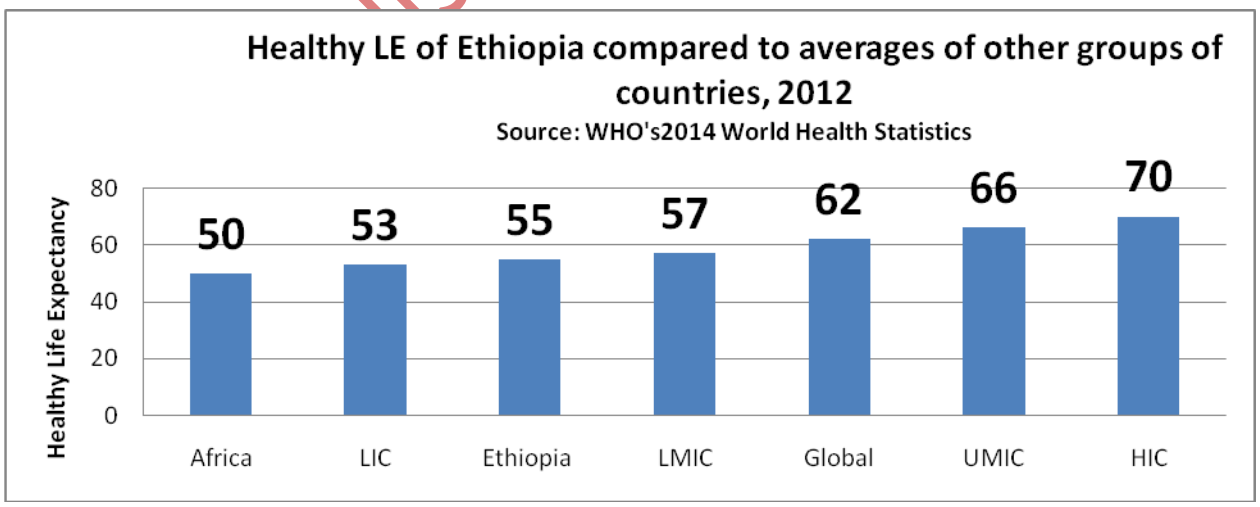
2012 will live about 20 additional years compared to those children born in 1990. This makes Ethiopia one of the six countries that made top individual gains since 1990[31].

Figure 24: Life expectancy at birth of Ethiopia compared with averages of groups of countries, 2012



The healthy life of Ethiopians is estimated to be 55 years indicating 9 years are compromised with morbid diseases or health conditions calling for improving quality of life along side extending life expectancy.

Figure 25: Healthy Life Expectancy of Ethiopians compared to average of other groups of countries in 2012



[31] World Health Statistics, WHO 2014. PP 43

5.1.1.9 Unfinished agenda to further improve health status

Though good trends are observed in health related MDGs, the number of citizens who are dying due to preventable and avoidable causes is still high compared to the global average. A considerable number of children and mothers are still dying due to failure to reach them with high impact interventions. The proportion of children stunted remains high with a slight decline exposing the nation to trans-generational consequences for intellectual and physical development. Even though encouraging results are witnessed in diseases targeted for global elimination and eradication, incidences happened in some parts of the country indicating the need to persistently exert efforts in all parts of the country. It is high time to study impacts of non communicable diseases and intervene at a national scale as some studies are showing an increasing burden. Neglected Tropical Disease remains a challenge to the health sector compromising quality of life and productivity.

Keeping the momentum that resulted in remarkable impact in the health status of people in Ethiopia as well as addressing emerging and reemerging health condition remains an overwhelming task that requires joint effort by all stakeholders.

5.1.2 Outcome and outputs (Access and coverage of interventions)

5.1.2.1 Child health:

The achievements registered in child health is by large is attributable to large scale implementation of promotive, preventive and curative primary health care interventions alongside a positive trend of socioeconomic changes. Among the important interventions that have been successfully implemented and contributed to the achievement are IMNCI/ICCM (currently being provided in more than 2500 health centers and 12,000 health posts), prevention and management of malaria (with 65% of under 5 children sleeping under ITN with IRS reaching 47% of houses in endemic areas in 2011), and community based nutrition programs. However, the coverage of some other essential interventions like proper case management of ARI and diarrhea is still low. In the 2011 EDHS, only 27 percent of children under age of five years with symptoms of ARI sought advice or treatment from a health care facility or provider. Similarly, one-fourth of them with fever and 32% with diarrhea sought advice or treatment from a health care facility or provider.

EPI, another important intervention, that needs to managed with close follow up to ensure each cohort of infants are reached. Currently, Ethiopia is providing vaccination against 10 diseases that affect children in their childhood and later in life. Four new vaccines were introduced since 2007 in addition to already existing 6 traditional antigens. The introduction of PCV 10, Rota and Penta vaccines coupled with ICCM program and implementation of HEP packages are also expected to lower childhood morbidity and mortality due to Pneumonia and diarrhea. These interventions are introduced at scale which may result in a considerable contribution in reducing child mortality. The recent HMIS report of EFY 2006 showed that the coverage of Pentavalent 3, PCV3 and Measles vaccine coverage reached 91.1%, 85.7%, and 86.5%, respectively. And the coverage of fully immunized children under one year of age reached 82.9% in EFY 2006. This is lower than the HSDP IV targets. Though the coverage looks good, the program in some areas is now suffering from high dropout rates, shortage of supplies, vaccine stock out and cold chain breakages.

5.1.2.2 Maternal, newborn and reproductive health:

Family planning

Contraceptive Prevalence Rate (CPR) among currently married women increased from 8.1% in EDHS 2000 to 41.8% in EMDHS 2014 (Fig. 25A). Hence, the objective of the national health policy[32] of increasing the prevalence of contraceptive use from the 4.0% in 1990's to 44.0% by the year 2015 is achieved earlier than the due date. While both rural and urban areas showed a consistent increase over time (Fig. 25B), a nine-fold increase in CPR was observed in rural areas (from 4.3% in EDHS 2000 to 39.0% in EMDHS 2014), with urban areas increasing from 35.6% to 59.6% (+67.4%) in the same period. Of note is the fact that the steepest increase in rural areas was observed between EDHS 2005 and EMDHS 2014, when CPR almost quadrupled in only 9 years (from 10.9% in EDHS 2005 to 39.0% in EMDHS 2014), due to the contribution of HEWs in promoting behavioural change and implementing FP services. Figure 26 shows that much of this increase was attributable to the sharp increase in the use of injectables (from 3.1% to 31.0% in the same period).

Figure 26: Trend in Contraceptive Prevalence Rate (25A) and Distribution by Area (25B) (EDHS 2000-2011 and EMDHS 2014)

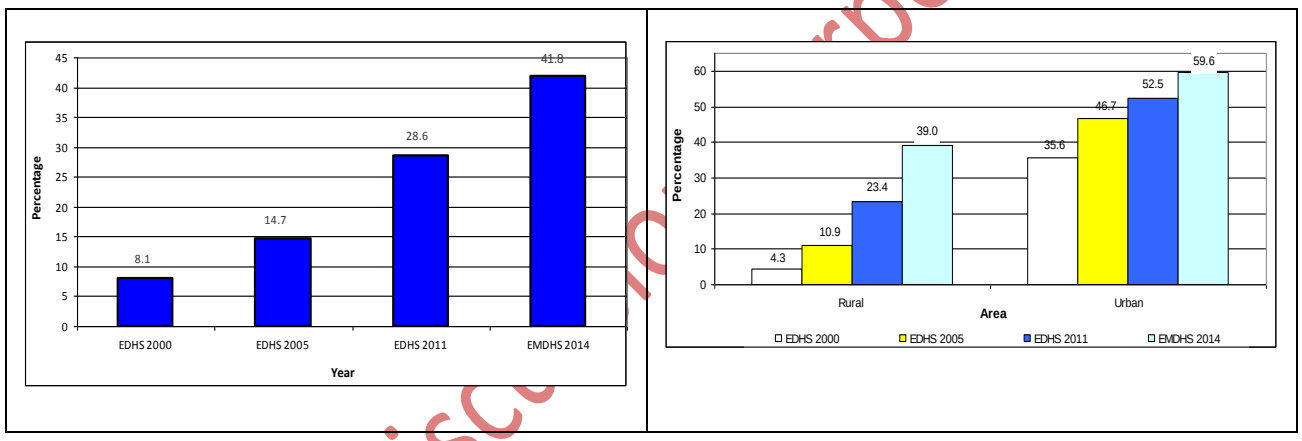
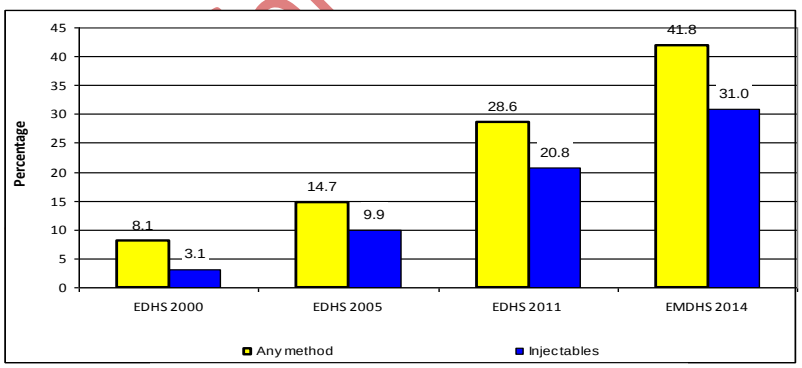


Figure 27: Trend in Contraceptive Prevalence Rate by type of contraceptive method (any method and injectables) (EDHS 2000-2011 and EMDHS 2014)



[32] National Health Policy of Ethiopia, April 1993.

Current use of any contraceptive method varied notably by region, ranging from 1.7% in the Somali Region to 64.1% in Addis Ababa. Similarly, use of any modern contraceptive method was lowest in the Somali Region (1.0%) and highest in Addis Ababa (57.4%).

The tendency in unmet need of family planning is gradually declining from 36% in 2000 to 25% in 2010. The highest unmet need for family planning is among the late adolescent age group (15-19 years) indicating the need to further strengthen Adolescent reproductive health programs.

While geographic and sociocultural factors account for much of the regional variations, the assumptive attitude of providers, both at health facilities and filed workers, was documented in DHS 2011. The percentage of nonusers who were visited by a fieldworker and who discussed family planning varies notably by region. The highest percentage is in Tigray (28 percent) and the lowest percentages are observed in Somali (7 percent), Affar (8 percent), and Gambela (9 percent). Afar is one good example of gaps in awareness and sociocultural barriers.

The HMIS data measures contraceptive acceptance rate (CAR) which is the proportion of women of reproductive age (15-49 years) who are not pregnant who are accepting a modern contraceptive method (new and repeat acceptors) in the year. The national contraceptive acceptance rate in EFY 2006 is about 63% (lower than HSDP IV target of 82%) ranging from 90.7% in Amhara to 10.6% in Somali region. The findings of FP coverage from both EDHS and HMIS confirm family planning use is markedly increasing in general and wide variation exists among regions.

Over the last 15 year, the FMOH has made unreserved efforts to expand access to family planning information, counseling services and method mix mainly through the health extension program. Long acting family planning methods have been emphasized in the last five years evidenced by increased implanon at community level since 2009 and scale up of intrauterine contraceptive devices in hundreds of districts since 2010. It is estimated that more than 90% of Ethiopian population has access to modern family planning methods through community, facility, social marketing and outreach based modalities. According to draft ESPA+, 87% of health facilities excluding health posts offer a modern method of family planning. About 99% of facilities and 79% of health posts offer family planning services at least five days per week.

Maternal and Newborn Health

With the aim of reducing maternal mortality to 267 per 100,000 live births, set of high impact interventions were being implemented including ANC, skilled birth services and PNC. According to HMIS reports, proportion of pregnant women received ANC services at least once exceeded 98%. However, continuity of the service and the quality of care is not optimal as evidenced by low coverage of skilled delivery, tetanus toxoid (TT) vaccine, screening of syphilis, and utilization of ITN as well as suboptimal uptake of PMTCT services among pregnant women.

Antenatal care

Mini-EDHS 2014 reported the ANC follow up with at least one visit and four plus visit as 57.2% and 31.6% respectively. Whereas, according to HMIS data, in EFY 2006 proportion of pregnant women received ANC (at least one visit) was 98.1% with 54.4% in Somali to 100% in Tigray, SNNPR, Dire Dawa, and Harari regions. HMIS does not yet capture ANC four visits.

Looking in to key service packages delivered using the ANC forum, tetanus toxoid vaccination was received in 65% of pregnant women among those who were reached by the 2012 EPI survey and LLINs utilization by pregnant women was reported at 42% in 2011 malaria indicator survey. Screening and treatment of

syphilis for pregnant women is yet very low. Use of magnesium sulphate for prevention and treatment of eclampsia is at rudimentary level.

While there is no doubt that access to ANC services has markedly improved, the quality of the ANC services is yet to be ascertained in order to meaningfully contribute to the health of mothers and their newborns. This need to be combined with routine monitoring of essential ANC components like micronutrient supplementation and screening and treatment for syphilis

The target of HSDP IV for delivery assisted by skilled providers was 62% and as per EDHS report increased from 10.0% in EDHS 2011 to 14.5% in EMDHS 2014, a 45% increase in only three years. The HMIS report also showed that the coverage reached 41% in the EFY 2006.

Regarding ANC service provision, the draft ESPA+ reports[33] that 87% of all facilities assessed offer ANC. This report indicated that about three-quarter (78%) and 62% (excluding health posts) provide TT vaccine and any of the services related to PMTCT respectively. More than half of the first-visit ANC clients (52%) in facilities excluding health posts had the basic lab tests during their visit (Urine glucose or protein, haemoglobin, blood grouping and syphilis tests).

Delivery Service

Clean and safe delivery by HEWs

As stated in Mini EDHS 2014, about 85% of births took place at home without skilled attendants. As per HSDP-IV , HEWs were to assist about one third of deliveries with six cleans (clean hands for the birth attendant, clean birth surface, clean perineum, clean instrument to cut the umbilical cord, clean cord tie, and a clean cloth for drying) and do early identification and referral in case of complications. According to HMIS reports, trend in clean delivery decreased in the last couple of years in Tigray, Amhara, Oromia, SNNPR, Gambela and Dire Dawa while increasing in Afar, Somali, Benshangul Gumez and Harari. The MoH's annual report indicated clean and safe delivery coverage by Health Extension Workers (HEW) declined from 11.6% in EFY 2005 (2012/13) to 8.8% in EFY 2006 (2013/14); this decline was due to the expansion of Health Centers (HC) and the strengthening of HC-Health Post (HP) networks, with subsequent focus on provision of skilled care at birth in the catchment areas and increase in SBA coverage.

The emphasis towards encouraging all women to deliver at health facilities (with the general motto of having "home delivery free kebeles") is among the reasons for recent declines in women who were attended by HEWs and is very likely to continue in the coming years as well, limiting the role of HEWs primarily to the promotional activities in ANC, including supporting the mother for birth preparedness and referral and the post-delivery follow ups.

Upgrading of HEWs to level IV and beyond transitions the clean and safe delivery, which was labeled to be unskilled, to skilled birth attendance by improving their skill and working stations.

Institutional delivery and emergency obstetric care

All pregnant women are encouraged to deliver at health facilities with skilled attendance. The HSDP IV target for skilled birth attendance was 62%. However, the proportion of skilled birth in EFY 2006 was 41%. There was wide variation across regions, ranging from 20.8% in Gambella to 85.0% in Addis Ababa. Despite the fact that an increase was observed in all regions, only Harari (78.2%) exceeded its regional target

[33] Ethiopia Service Provision Assessment Plus Survey, Oct 2014 (not yet published)

(72.0%) in 2006 EFY (FMOH, 2014). Although there are wide variations across regions, tremendous improvement in skilled birth attendance has been reported in some of the regions recently. Remarkable increase in skilled delivery was reported from Tigray region and some zones of Oromia, Amhara and SNNPR in EFY 2006.

Given the speed of change that is being observed, HSDP-IV targets for institutional delivery, however far it looks at the moment, may be reachable. The recent increase in skilled birth attendance is ascribed to high level political commitment, efforts of HDA and HEWs with resultant demand for services, and provision of ambulances on top of expansion of health facilities and deployment of midwives.

The number of health centres and hospitals providing basic and comprehensive emergency obstetric and new-born care are increased compared to 2008 national baseline assessment. According to HMIS, the number of HCs that are ready to provide BEmONC service has increased to 1813 (about 50%) and 105 hospitals can provide CEmONC. However, the rate of caesarean section, an important indicator of access to emergency obstetric care, is 1.6% of all the estimated pregnancies in the 2005 EFY, compared to the national target of 7%.

According to the draft analysis of ESPA+, nearly 65% of all facilities excluding health posts offer normal delivery service. Almost all (99%) of government managed facilities offer normal delivery while only 27% of private for profit facilities and 69% NGO facilities do provide the service. Overall, only 3% of facilities provide caesarean delivery service predominantly available in hospitals with the exception of 1% of the health centers. The report has also assessed signal functions for emergency obstetric care and reported that government facilities offering normal delivery services are more likely to apply BEmOC signal functions than other managing authority type. Availability of anticonvulsant is very low among the signal functions in all health facilities including health centers (Fig. 27 and 28).

Figure 28: Availability of Signal Functions of Emergency Obstetric Care in facilities excluding HPs, draft analysis of ESPA+, 2014

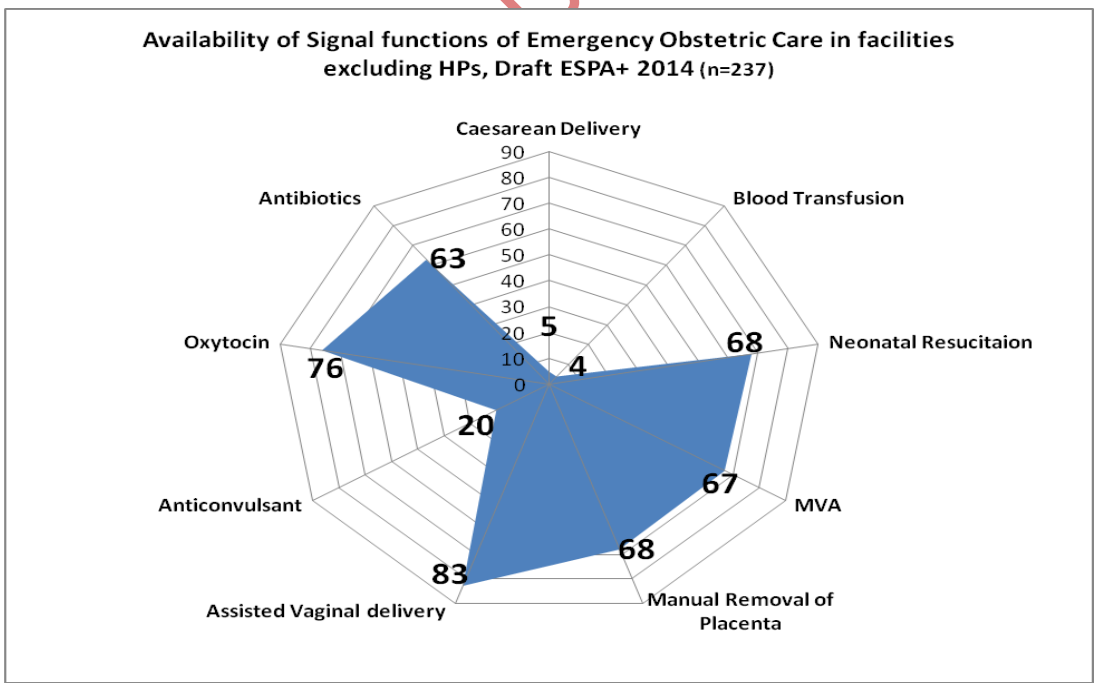
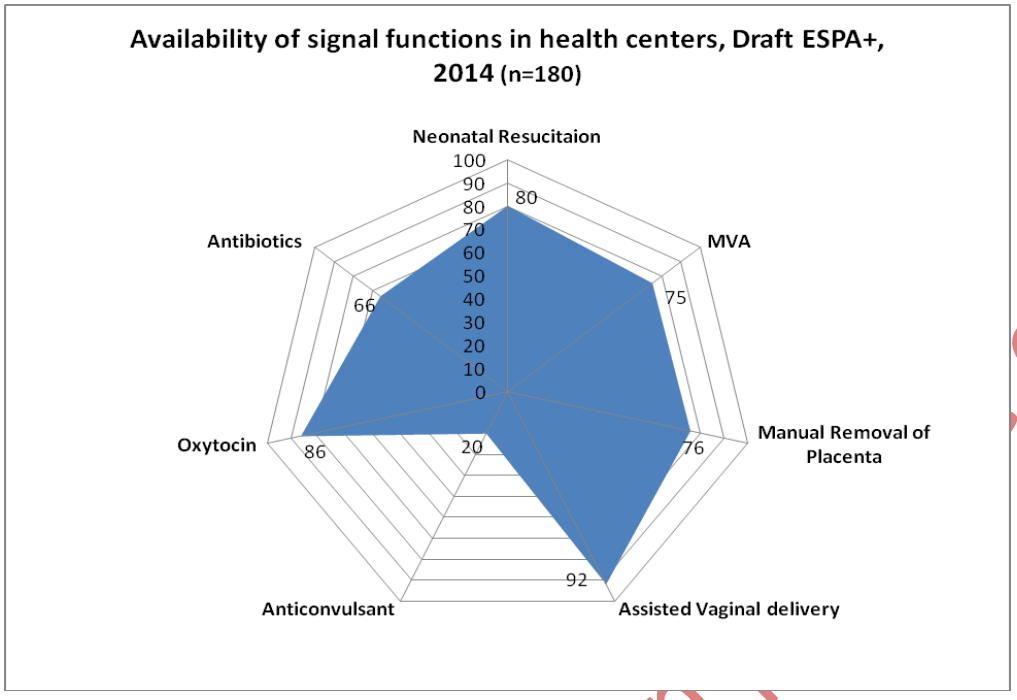


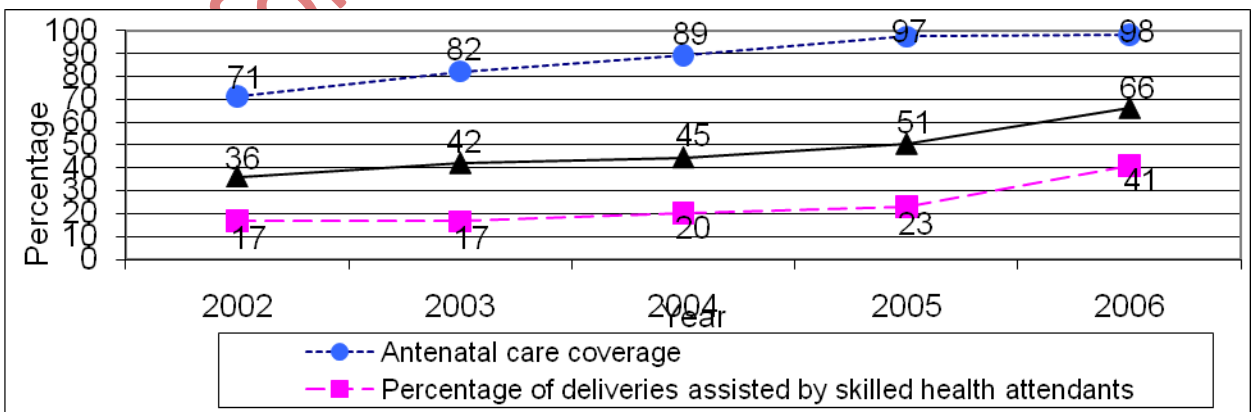
Figure 29: Availability of Signal Functions of Emergency Obstetric Care in health centers excluding HPs, draft ESPA+ analysis, 2014



Postnatal Care

The postnatal period is a critical phase in the lives of mothers and newborn babies. Most maternal and infant deaths occur during this time. Therefore, postnatal care is one of the high impact interventions planned in HSDP with a target to reach 78% by the year 2014/15 (EFY 2007). Although PNC in the first 2 days is not captured by HMIS, EDHS 2014 reported coverage of 12% for PNC within the recommended two days period. Nevertheless, this is an improvement from three years ago when only 7 percent received postnatal care during the same period (EDHS 2011). However, the HMIS report showed higher coverage of 66% in the EFY 2006.

Figure 30: Trend of ANC (1st visit), delivery by Skilled birth attendant and post natal care 2002-06 EFY



The recently introduced community based newborn care is expected to improve the newborn health. A number of initiatives are ongoing to tackle the challenges including availing newborn corners at health centers, establishing neonatal intensive care units in referral hospitals and more recently, community based newborn care by HEWs. The results of all these concerted efforts are yet to be seen.

PMTCT

The proportion of pregnant women counselled and tested for prevention of maternal to child transmission (PMTCT) of HIV increased from 54.9% to 57.0%. The percentage of HIV-positive pregnant women who received ART to prevent Maternal to Child Transmission (MTCT) of HIV has been estimated at 60.6% in EFY 2006, with an increase from 42.9% in EFY 2005. The number of health facilities providing the service increased from 1352 in EFY 2002 to 2495 in EFY 2006. However, the PMTCT coverage needs to exceed 85% in order to halt new vertical transmission. The low level of facility delivery, poor referral linkage in some areas and suboptimal community awareness and ever-changing modality contributed for suboptimal coverage of PMTCT. Recent efforts, guided by the National Road Map for maternal and new-born health and the accelerated plan for PMTCT, are very encouraging with rapid increase in prophylaxis coverage from less than 20% in EFY 2003 to more than 60% in 2006. Further efforts that focus on delivering PMTCT services as an integral component of MNCH care packages and focusing on areas with high unmet needs is to be undertaken to achieve the goals of eliminating MTCT of HIV.

Abortion care

With an estimated range of annual rate of 23-31 abortions per 1,000 women aged 15–44[34], about half a million pregnancies are estimated to end in abortion (a consequence of unmet need of FP) each year in Ethiopia indicating the need of comprehensive abortion care. However, only 181,812 clients received abortion care in 20013/14 with slight improvement from the preceding year performance of 138,303 cases according to MOH's annual performance report.

Safe abortion is provided as the law permits following the 2005 revised family law in relation to abortion and issuance of safe abortion technical guideline in 2006. Safe abortion care has been introduced in hospitals and health centers in the last few years. Now days, the service can readily be available in public, private and NGO run facilities.

Adolescent and youth friendly reproductive health

Recognizing the fact that these group are extremely vulnerable to STD/HIV/AIDS, unwanted pregnancy and abortion, the MoH developed national strategy with minimum service package for scaling up of adolescent and youth reproductive health services.

The highest unmet need for family planning in 2011 EDHS was among the late adolescent age group (15-19 years) indicating the need to further strengthen Adolescent reproductive health programs. The adolescents birth rate for three years before the survey in Ethiopia reduced to 65 births per 1,000 women in 2014 mini DHS[35] compared to that of 79 in 2011 EDHS[36].

Although there is increasing demand for service from young population including in rural areas, these group is yet hesitant to use the service in public facilities. Provider bias was also indicated in DHS 2011. An interesting age pattern is observed for women who were visited by a fieldworker who discussed family

[34] Unsafe abortion: Global and regional estimate of the incidence of the unsafe abortion and associated mortality in 2003, 5th edition, WHO, 2003. PP 13n

[35] Ethiopia Mini Demographic and Health Survey 2014 Central Statistical Agency Addis Ababa, Ethiopia July 2014; pp 28

[36] Ethiopia Demographic and Health Survey 2011 Central Statistical Agency Addis Ababa, Ethiopia 2011; pp 70

planning, as well as for those women who visited a health facility in the past12 months and discussed family planning. For both groups of women, the percentage that discussed family planning is lowest in the youngest age cohort, age 15-19, but steadily increases and peaks in the 35-39 age cohorts before declining in the oldest age groups. For example, only 10 percent of women age 15-19 reported being visited by a fieldworker who discussed family planning, compared with 22 percent of those aged 35-39.

Limited access and utilization of adolescent and youth friendly reproductive health services contributes to high rates of maternal mortality and morbidity due to abortion, fistula and other pregnancy related complications.

Fistula Care

About 15% of pregnant women globally are estimated to develop life-threatening obstetric complications. In addition to maternal deaths, obstetric fistula and uterine prolapse, chronic pelvic pain, depression and exhaustion are among long-term complication of pregnancy disabling women who survive delivery-related death.

Because of the low rate of institutional deliveries, data on birth outcomes is not yet universally or routinely available in Ethiopia, proxy indicators are used to estimate prevalence and incidence of obstetric fistula. It was previously estimated by UNFPA that 9,000 women in Ethiopia develop obstetric fistula each year, and that up to 100,000 women are living with untreated fistula[37]. A more recent (2013) USAID commissioned obstetric fistula situation assessment estimated a fistula incidence of 3,500 per year (2010 baseline) with a prevalence of 37,500 untreated fistula and 161,000 urinary incontinence cases in 2010.

There are about 9 fistula care centers in the country mainly supported by NGOs. Reducing unmet need of family planning, improving institutional delivery, strengthening EmOC and referral system coupled with efforts of community awareness are expected to eliminate fistula in the near future.

According to draft analysis of ESPA+, 62% of facilities provide all three basic child health services (outpatient curative care, child vaccination and child growth monitoring. About 96%, 83% and 81% of health posts provide out-patient curative care, growth monitoring and vaccination services respectively.

5.1.2.3 Major disease burdens

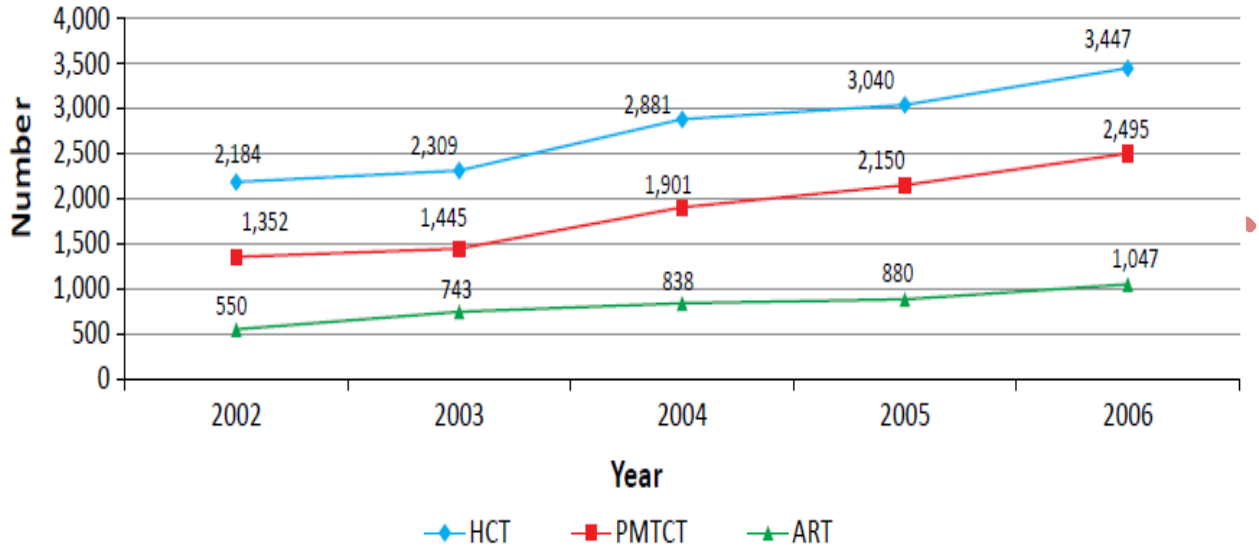
HIV/AIDS

Since the discovery of HIV virus in 1984, HIV/AIDS was recognized as a national priority agenda to curb the epidemic. HIV/AIDs policy followed up with prevention and control strategies were designed and implemented with the support of development partners and the community at large. As the result of concerted effort, the national prevalence of HIV has reduced to 1.5% (EDHS, 2011) with further projected reduction to 1.2% in 2014.

There was a steep increase in the number of facilities providing HIV Counseling and Testing (HCT), PMTCT and Antiretroviral Therapy (ART) services.

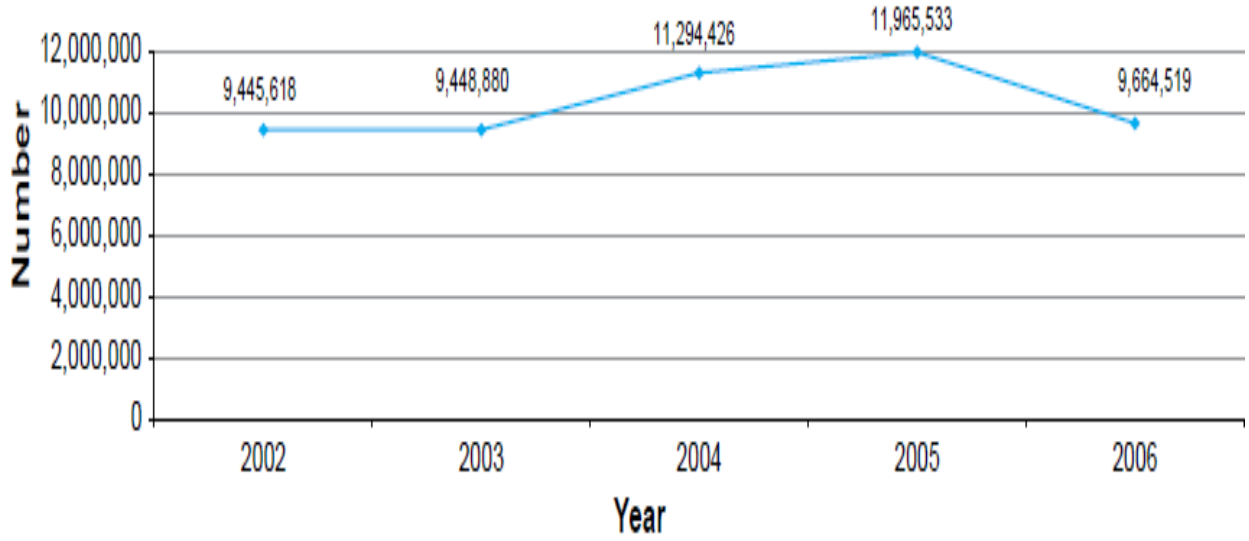
[37] UNFPA France Donnay. UNFPA: Oral presentation of the Campaign to End Fistula, New York 2003" and/or "Media advisory documents: Launch of the Campaign to End Fistula, New York, 2003 at:http://www.endfistula.com/natalie/Ethiopia.htm.

Figure 31: Trend in number of facilities providing HCT, PMTCT and ART services (2002-06 EFY)



One of the targets of HSDP IV was to provide HCT service to 9.2 million people annually. This target was met as depicted in the figure below.

Figure 32: Trend in number of clients using HCT (2002-06 EFY)



As the result of HIV prevention, care and support services expansion, an average of 10 million HIV counseling and testing services are being provided yearly. In EFY 2006 (2013/14), about 805,948 people are ever enrolled for HIV care and 492,649 and 344,344 of them are ever started and currently on ART respectively. Concerning PLWHA currently on ART, out of the target of 431,644 who need ART, 344,344 PLWHA were currently on ART at the end of EFY 2006, with a target achievement of 79.8%[38].

[38] HSDP IV Annual Performance Report 2006 EFY (2013/14); MOH. PP 32, 34

Figure 33: Trend in number of people living with HIV/AIDS who accessed chronic HIV care

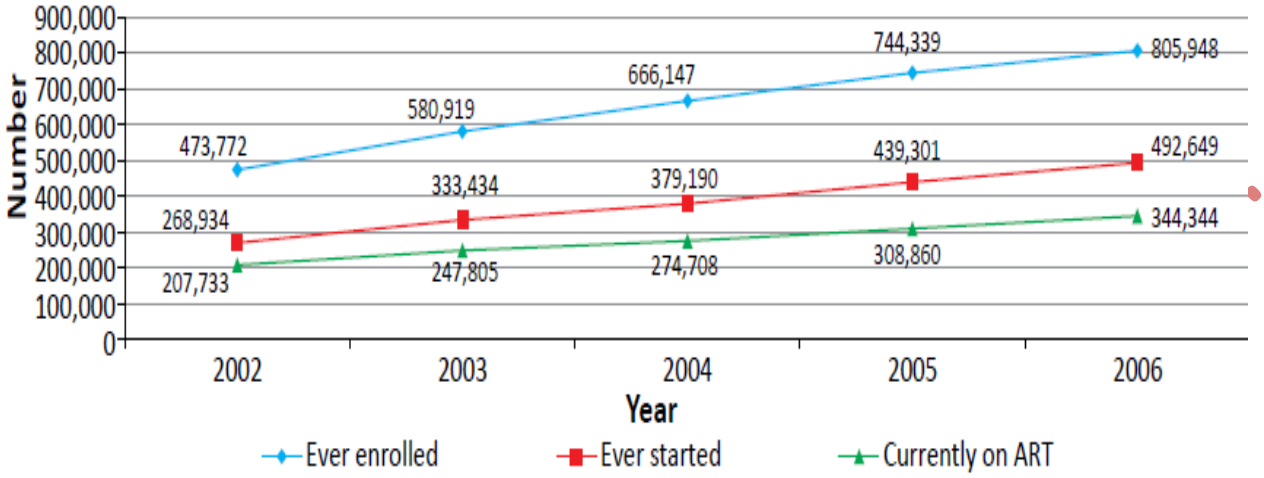


Table 1: **Progress against HSDP IV targets**

Domain	**HSPD IV Expectations**	**Status**
Outcomes	Reduce incidence of HIV in adults from 0.28% to 0.14%	Incidence down to 0.03%
	Increase proportion of population aged 15-49 years with comprehensive knowledge of HIV/AIDS from 22.6% to 80%	General knowledge on HIV is high, though comprehensive knowledge is low. No overall data, however, on current figures
Outputs	Provide HCT (VCT+PITC) to 9.2 million people (annually)	Moe than 9.4 million persons received HCT each year since 2002 EFY
	Increase percent of people aged 15-24 using condom consistently with non-regular partners from 59% to 95%	
	Increase proportion of eligible children who are receiving ART to 95%	Limited scale up of pediatric HIV
	Increase proportion of eligible pregnant women receiving ART to 95%	Scale up of PMTCT services, and at present, testing of 1.1million, out of 2.3 million ANC mothers.
	Increase proportion of eligible adults receiving	Reached 78.9% in 2006EFY

Domain	HSPD IV Expectations	Status
	ART from 53% to 95%	
	Increase number of patients ever started on ART from 246,347 to 484,966	492,649 persons were ever started on ART as of 2006 EFY
	Increase number of STI cases treated from 39,267 to 60,000 Outcomes	Over 104,607 cases treated in 2012

Tuberculosis & leprosy

Tuberculosis

Ethiopia is among the high burden countries for drug susceptible TB, MDR-TB and TB-HIV co-infections as well as among countries that contribute for high number of missed cases of tuberculosis[39]. Hence, Tuberculosis is still among the major communicable diseases with huge public health significance. Detecting and curing tuberculosis are among key health interventions for addressing poverty and inequality.

Promising progresses have been made in the last couple of decades through the Health Sector Development Programs which were launched since 1997. The earlier strategies (HSDP I & II) were focused on integrated TB and leprosy control programs (TLCP). HSDP III was mainly focused on enhancing the case detection rate and completion of treatment. HSDP IV mainly focused on initiatives that are in line with the global STOP TB Strategy and strengthening early case detection of leprosy.

The TB case detection rate was 53.7% in 2006 EFY, below the detection rate of 58.9% in 2005 EFY. TB treatment success and cure rates reached to 92.1% and 69.1% in EFY 2006 respectively.

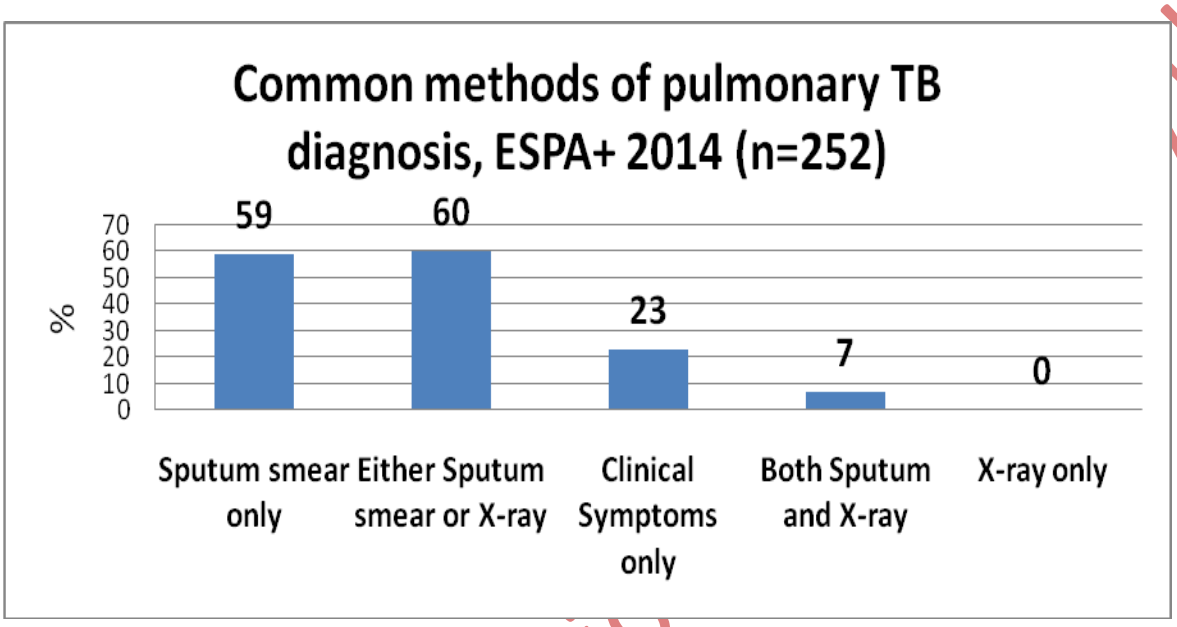
Multidrug resistant TB is a public health concern as the number of cases seen is increasing. Since 2001 EFY, a cumulative total of 1,559 MDR TB patients were enrolled in second line drug (SLD) treatment. More than 38% (598 cases) of the MDR patients were enrolled in 2006 EFY as the result expanding diagnostic, treatment and follow up sites. In EFY 2006, additional 13 MDR TB centers started treatment services, increasing the total number of MDR treatment centers to 32 country-wide, while a total of 332 health institutions were providing follow-up services. Treatment outcomes of MDR TB patients enrolled on treatment in EFY 2004 were evaluated in EFY 2006, with 216 out of the total 289 MDR TB cases (74.7%) having completed successfully their treatment.

The community based TB care is short of the target to reach 80% of the health posts. About 34% of Health Posts are providing DOTS services (treatment follow up) during HSDP mid-term review, up from 15% at the beginning of HSDP IV. According to the draft analysis of ESPA+, 29% of healths posts are involved in tuberculosis screening and/or treatment follow up. The contribution of public private partnership is about 13% with about 250 private facilities involved in the PPP initiative.

[39] World TB Report, 2014

Most common method for pulmonary TB diagnosis is smear microscopy. Figure 30 shows most common methods observed in the draft analysis of ESPA+ assessment. Of the facilities with excluding health posts, 52% have diagnostic capacity using TB smear microscopy while 6% has chest X-ray and 2% TB rapid diagnostic test kits. Of the TB smear microscopy facilities, only 11% and 12% have internal and external quality assurance system in place respectively while 24% have both systems.

Figure 34: Common methods of pulmonary TB diagnosis, draft analysis of ESPA+ report 2014



The Global Plan to Stop TB 2011–2015 includes the target that countries maintain at least one smear microscopy centre per 100 000 population[40]. The 2014 global TB report indicated that Ethiopia has more than 2100 smear microscopy laboratories exceeding the target set by the global STOP TB plan. Following proof of superiority of Fluorescent light-emitting diode (LED) microscopy on sensitivity, qualitative, operational and cost advantages over the conventional Ziehl–Neelsen (ZN) light microscopy, WHO recommended that LED microscopy, be phased in as an alternative for ZN microscopy in 2009. Globally, the switch to LED microscopes has been gradual; it was reported to have occurred in only 6% of microscopy centers in 2013. Ethiopia is not exception in the slower pace of transitioning to LED microscope but better than the global average by having 13% of its microscopic centers using LED (Global TB report, 2014). However, the number of laboratories for TB culture and drug sensitivity tests (DST) are relatively lower compared the global target of availing one culture and DST center to a population of 5 million. Currently, Ethiopia has seven culture and DST centers placed in strategic locations[33]. Regarding TB/HIV diagnostics, 80% of TB diagnostics or treatment sites have HIV diagnostic capacity and in about 64% of the facilities there is a system in place for diagnosis HIV among TB patients (draft ESPA+, 2014). Similarly, more than 88% of health centers have medicines for first-line treatment of TB while. Furthermore, a total of 28 GeneXpert machines were providing service in 2006 EFY while essential resources were made ready for 71 machines additional machines.

One of the long standing challenge of the TB program was the very low case detection rate which was partly due to the estimate based on WHO's parameters. The first TB prevalence survey conducted in 2011 has enabled to better estimate the prevalence of the disease. The survey showed a TB prevalence (all forms) of

[40] *The Global Plan to Stop TB, 2011–2015*. Geneva, World Health Organization, 2010 (WHO/HTM/STB/2010.2).

240 per 100,000 populations that was lower than the previous model-based estimate (585 per 100,000 populations); furthermore, the smear positive TB incidence (less than 80/100,000) was at least two times lower than the previous estimate.

The TB program in Ethiopia is known with its organized research platform called the TB Research Advisory Committee (TRAC) with FMOH as its secretariat. An annual meeting on TB research is held as part of the World TB day celebrations each year where TB and TB related research findings are shared with stakeholders. Moreover, there is an ongoing operational research capacity development program being implemented through AHRI, EHNRI and partners.

Efforts to improve Childhood TB care, scaling up of community based TB care, putting TB/HIV co-infected patients on ART, strengthening program management of MDR TB test and TB infection control need to be further strengthened.

Leprosy

The prevalence of leprosy has sharply declined from 200 per 100,000 population in 1983 to 0.5 per 100,000 population in 2012, following the introduction of Multi Drug Therapy (MDT) in 1980s. The prevalence of leprosy has been constant over the past five years and, in EFY 2006, a total of 3,080 new leprosy cases were detected, the majority of whom being detected in Oromia and Amhara Regions (FMOH annual report, 2014). Intensive training for leprosy management is still carried out in the pockets of the country where the condition is still prevalent with passive case detection ongoing.

Table 2:Progress against HSDP IV targets[41]

Domain	HSDP IV expectations	Status
Outcomes	Increase Tuberculosis Cure Rate from 67% to 85%.	TB cure rate is still low, at 69.1% (2006 EFY FMOH report).
	Reduce mortality from all forms of TB from 64/100,000 to 20/100,000.	TB mortality estimates are at 32/100,000, short of the HSDP IV target
	Reduce proportion of registered TB patients who are HIV positive 24 to 10%.	Estimated to be 11% (Global TB report, 2014)
Outputs	Increase TB case detection rate from 36% to 75%.	53.7% (2006 EFY FMOH report)- below the HSDP IV target
	Increase TB treatment success rate from 84% to 90%.	Current estimates for treatment success rate are 92.1%, above the HSDP IV target (2006 EFY FMOH report)

[41] HSDP IV MTR

Domain	HSDP IV expectations	Status
	Increase proportion of MDR TB cases treated with second line drugs from 2% to 55%.	1559 cumulative clients put on MDR treatment. WHO estimates 1400 MDR-TB among notified pulmonary cases for 2013
	Increase proportion of PLHIVs screened for TB from 15% to 80%.	HMIS data has achievement at 44% (about half the target), while PEPFAR estimates target at 86%

Malaria

In past decade, Ethiopia has made significant strides in expanding coverage of key malaria interventions throughout the country. The commitment of government coupled with support from its partners has enabled to scale up use of artemisinin-based combination therapy (ACT) as the first line treatment, expand use of rapid diagnostic tests (RDT) by the Health Extension Workers (HEWs) as well improve the vector control and prevention through the wide distribution of long-lasting insecticidal nets (LLINs) supplemented by targeted indoor residual spraying (IRS).

[42]In Ethiopia, nationally aggregated data show an increase in admissions, possibly due to an expansion of health services, with increased hospitals, health centers, and health posts being built since 2005. However, a review of data from 41 hospitals located at <2000 m altitude (malarias areas) indicated a >50% decrease in confirmed malaria cases, admissions and deaths in 2011 compared to 2001.

Draft analysis of ESPA+ indicated that malaria diagnosis and/or treatment services are universally available in most of Ethiopian health facilities. More than 90% of health facilities excluding health posts (77% of health posts) offer malaria treatment servicers; however, a little under half have laboratory diagnostic capacity for malaria. Overall, 60% of health facilities excluding health posts have capacity for parasitological diagnosis of malaria using either microscopy or rapid diagnostic tests. About 85% of government facilities have the capacity to provide malaria diagnostics compared with 28% of private-for-profit facilities (draft ESPA+, 2014). About 42% of all facilities that provide malaria services had stock of first-line ACT with 74% of the stocks are from government owned facilities and 4% stocks are from private-for-profit facilities.

The cumulative number of ITNS exceeded 58 million and about 4 million households in malarious area are sprayed yearly with indoor residual sprays. On Average three million malaria cases are being treated yearly with few hundreds of deaths making the malaria case fatality rate below 0.01%. In 2006 EFY (2013/14), the total number of laboratory confirmed plus clinical malaria cases were 2,627,182 treated and 213 deaths were reported[43].

Table 3: **Progress against HSDP IV targets**[44]

[42] World malaria report 2013…

[43] HSDP annual performance report, MOH 2006 EFY

[44] HSDP IV midterm review

Domain	HSPD IV Expectations	Status
Outcomes	Increase proportion of households in malarious areas who own at least one LLITN from 65.6% to 90%.	54.8% of HH's with a LLITN
	Reduce lab confirmed (RDT/Microscopy) malaria incidence per year, among under-5 children & adults to less than 5 per 1000 population per year	No evidence in reduction in total numbers of Malaria cases (through national fever prevalence has reduced from 24.0 to 19.7% un I5's, and from 21.8 to 14.9% in U1's. mortality has reduced) Malaria prevalence (microscopy under 2,000m) at 1.3 per 1,000 (1% Pf, 0.3% Pv), and by RDT's at 4.5%
	Increase proportion of pregnant women who slept under LLITN the previous night from 42.5% to 86%.	35.3% of pregnant women slept under a net, the previous night (63.8% amongst HH's with at least one net)
	Increase proportion of U5 children who slept under LLITN the previous night from 41.2% to 86%.	38.2% slept under a net the previous night (64.5 amongst HH's with at least one net)
	No monthly malaria cases report for 24 months from previously malarious Kebeles of targeted Woredas for elimination of malaria.	
Outputs	Increase proportion of households in IRS targeted areas that were sprayed in last 12 months from 55% to 77%.	Increase in HH's covered, from 20% in 2007 to 46% in 2011
	100% of suspected malaria cases are diagnosed using RDTs & or microscopy within 24 hours of onset of fever.	Access to care metric improved, from 15% access to care within 24 hours to 51% at present
	Reduce lab confirmed (RDT/Microscopy) malaria case fatality ratio among under-5 children & adults to less than 2%	Mortality has reduced significantly, due to better drug quality and early diagnosis

Non Communicable Diseases and injuries

The burden of chronic diseases is increasing in low- and middle-income countries, where it constitutes a multiple burden along with communicable diseases, maternal and perinatal conditions and nutritional problems.

Cognizant of the double burden of non communicable diseases, the ministry of health has developed a comprehensive prevention and control strategic action plan of NCDs and their risk factors focusing on reduction of risky behavior. The major NCDs that are being considered include cardiovascular diseases, diabetes mellitus, cancer, respiratory problems, injuries and mental health. Prevention and control of the common risk factors namely physical inactivity, unhealthy diet, alcohol consumption and cigarette smoking are given due emphasis nowadays. Efforts are being made to establish cancer treatment center in few of the university hospitals.

Neglected Tropical Diseases

In Ethiopia, most of the NTDs in the WHO list are present, but eight attract most attention because of their high prevalence, tremendous health and development impacts and amenability to control. These disease are known to debilitate, deform, blind and kill sizeable proportions of the population.

The focus on NTDs started to get momentum in the recent years. In 2006 EFY, about 7.5 million people (out of the planned 8.4 million) received Ivermectin treatment for onchocerciasis while 1.4 million people received preventive therapy (Ivermectin and Albendazole) for lymphatic Filariasis. Over the last few months, 1.4 million tablets of Praziquantel and 8 million tablets of Mebendazole have been given to school-children as part of the schistosomiasis and soil-transmitted helminthiasis prevention and control.

5.1.2.4 Nutrition

Cognizant of the nutrition issues, a national nutrition strategy and program (NNP) has been developed and implemented in a multi-sectoral approach. The HSDP IV has integrated nutrition into the HEP to improve the nutritional status of mothers and children through Enhanced Outreach Strategy (EOS) – now being transformed into the Community Based Nutrition program (CBN), Health Facility Nutrition Services, and Micronutrient Interventions and Essential Nutrition Actions / Integrated Infant and Young Feeding Counseling Services. Besides, more than 10,000 Health Facilities were treating Sever Acute Malnutrition (about 95% of which are health posts). With the contribution of these efforts, the prevalence of maternal anemia has declined from 27% in 2005 to 17% in 2011.More than 10 million children are receiving Vitamin A supplementation and de-wormed annually.

In EFY 2004 10,000 Health Facilities were treating SAM – 95% are HPs. In total 3995 metric tons Ready to Use Food was disseminated. The HMIS report that 322,336 SAM cases were treated last year with 85.2% cure rate, defaulter rate of 4.1%, and a mortality rate of 0.4%.

5.1.2.5 Hygiene and environmental Sanitation

As that of NNP, the National WASH Program has a multi-sectoral approach involving four Ministries (Ministry of Water & Energy, Ministry of Health, Ministry of Education & Ministry of Finance and Economic Development) who have pledged, through a Memorandum of Understanding to support an integrated WASH program that addresses the needs of individuals, communities, schools and health posts more holistically and reduces bureaucratic compartmentalization of services. The Health Extension Program is one of the government's primary vehicles for driving sanitation improvement at the kebele level. Of the 16 packages, 7 of these cover hygiene and environmental sanitation: excreta disposal, solid and liquid waste disposal, water quality control, food hygiene, proper housing, vector control (arthropods and rodent control), personal hygiene, health education and promotion. The cumulative number of households with latrines was 15,645,216 at the end of EFY 2005, with coverage of 86.1%, short of the 92% target set for the year. A total of 3,655 kebeles were declared as to Open Defecation Free (ODF) in EFY 2006. Reducing the contamination of household water supply has led to a reduction in diarrhea prevalence for children under 5 years old from 23.6% in 2000 to 13% in 2011.

5.1.3 Processes and Inputs

5.1.3.1. Enhancing Community empowerment, engagement and participation

5.1.3.1.1 Health Extension Program

Ethiopia's health extension program is a community based strategy to deliver health promotion, disease prevention and selected curative health services at the community level. It is a mechanism to provide health service in an equitable manner to all segment of population in the country. The service is provided free of charge. The HEP has 16 health packages categorized in to four major components. The four major areas are promotion of hygiene and environmental sanitation, prevention and control of major communicable diseases, promoting and providing of family health service and health education and communication. Impressive achievement has been made in scaling up of HEP in rural areas. The health extension program improves the utilization of health services by linking community and health facilities particularly health centers. The health extension program supported by organized and functioning health development army significantly improves the access and utilization of key health interventions.

The priorities areas in terms of HEP for HSDP IV were scaling up of urban and pastoralist health extension program , maintain and improving of quality of rural health extension program and organization of health development army.

As thus far more than 38,000 HEWs have been trained and deployed in agrarian, pastoralist and urban areas. In the last decade tremendous gains have been registered in terms of improving access and utilization of latrines, increasing contraceptive acceptance rate, ANC, assisted delivery, improved health seeking behavior, in expanding vaccination services, malaria control and prevention and in reduction of new HIV infection. Moreover, HEWs also started treating common childhood diseases including pneumonia and sever acute mal-nutrition.

Nevertheless, demand for quality and wide scope of services of HEP is also growing among community. As literacy and socioeconomic situation improves, the demand for quality service is also increasing. To satisfy the demand of the community HEW's knowledge and skill needs to be improved. The MoH is working to improve the skills and competency of HEWs through integrated refresher in service training and upgrading of HEWs into level 4 (diploma). However, turnover rate of HEWs are high in some places. Some health posts need to be rehabilitated. Revisiting of HEP in the coming years is critical to sustain the gains made so far and address the needs of the community. Besides, training of HEWs to next higher level, creating mechanism for retaining them and improving the health post accordingly are among the issues that needs to be addressed in the subsequent strategy.

The HEWs are playing a pivotal role in the process of establishing community ownership through creating systematic and organized popular mobilization called Health Development Army (HDA) with the spirit of solidarity to create healthy and productive community.

5.1.3.1.2 The Health Development Army (Community)

Government of Ethiopia believes organizing citizens voluntarily to functional Development Army can serve as as tool to haste the achievement of GTP targets. To this end, the ministry of health follows the Health Development Army (HDA) mechanism to organize community and health workers. The health development army is a group of persons or household heads organized based on settlement or social proximity to participate, teach and learn each other and take practical actions for the betterment of individuals, families and community health. The name *army* denotes a group of committed, enthusiastic persons who are prepared to achieve a certain task or objective. HDA are organized by their proximity/neighborhood of

settlement and other social networking approximately within 0.5 to 1 Km of every habitation with smallest organized group commonly called one-to-five networks. Based on the neighborhood about five to six one to five networks' again is re-organized to health development team that comprised 25 to 30 household living in the same village. It is built on the tradition of Ethiopian's caring each other during the grief or joy.

HDA initiative involves all households in the specific village and broadly all residents in every kebele. HDA creates wider public movements to address key issues. For instances, it involves youth to be organized and support to transport laboring women to the nearest road where ambulance can pick or to health facilities using local stretchers , men also motivated to prepare sanitation facilities and involved in mass campaigns. Students serve as key messengers for health messages and influenced their families to practice healthy life style. In some places, HDAs are mobilizing resources to support the neediest members of their networks and some are collaborating in income generation activities.

Health Development Army (HDA) implementation has started in EFY 2003, with progress being made in the organization and network formation over the past three years. According to MOH's annual report, a total of 442,773 HDA groups with 2,289,741 one-to-five networks were formed in EFY 2006.

Although, the mechanism of reaching every household and community through health development army is relatively recent initiative started during HSDP IV, there are evidences that in areas where HDA advances the coverage of key health interventions improved significantly. For instance, in Tigray region where the HDA is functioning well, the number of women giving birth at health centers doubled the preceding year. Similarly, the performance of key health services improved in some zones and woredas of Oromia, Amhara and SNNPR. However, approperiate organization and capacity building of HDA remains a challenge in some parts of the country. Particularly the function of HDA in developing regions and urban areas didn't matured yet. Tune fining implementation based on evidences, recognition for better implementation, tailored training, strengthening HEP and PHCU link and keeping the momentum of political commitment is critical in scaling and sustaining HDA gains.

5.1.3.1.3 Establishment and Operationalization of Facility Governing Bodies

Establishment of governing body is a hallmark of health facility autonomy. Supervision reports indicate that all hospitals and 93.3 % of HCs have established governing bodies. The establishment of governing bodies enhanced efficient decision-making by cutting bureaucratic chains and enhancing the responsiveness of the health institutions to the local communities. The facility governing bodies approve the health facility plan and budget, decide on revenue retention and utilization, review implementation of the new fee waiver system and evaluate performance of health facility, amongst others. Furthermore, the governing bodies allowed the health facilities to advocate for more resources and implement innovative income generating activities that could be used to improve quality of service.

As per the legal framework of health service delivery administration, governance and management, health facilities shall be administered by a joint governing body established from the community, staff of the health institutions, and representatives from other government offices. Therefore, among the 3,351 health facilities which are under the reform (125 hospitals and 3,226 HCs), 3,103 health facilities (123 hospitals and 2,980 HCs) have formed governing bodies, with most of them being functional in EFY 2006.

The governing bodies' meeting schedule varies from region to region, and from facility to facility. Most are expected to meet every quarter. Nearly 52% of hospitals governing boards and 48.5 percent of health centers governing bodies meet every month. Besides, 97 percent of hospitals and 75 percent of the health centers

confirmed that their respective governing board/bodies approved their expenditure items in 2010/11. Of these, all hospitals and 61 percent of the health centers indicated that their governing board/bodies submitted a facility budget to the RHB/WoHO. And nearly 90 percent of the hospitals and 58 percent of the health centers reported that their retained revenue utilization plan was appropriated by their respective council.

Facilities noted a high turnover of governing body/board members as a result of their busy work schedules and absence of incentive mechanisms as their major challenges. Measures taken to overcome these challenges included continuous discussion and communication with the Woreda administration and Woreda health office to address replacement or substitution of none-active members, scheduling meetings at more convenient times for board members, and submitting recommendations to the respective Woreda administrations for approval of financial incentives to be paid to governing body/board members. In some regions, the heads of women association are members of the facility governing boards and hence, they are able to represent gender issues. In other regions, the participation of women group is weak.

Another area of improvement in governance of health facilities is the fact that the governing bodies provide less attention to other aspects of governance other than decisions on plans and retained revenue use. Governance is beyond that. It is about transparency and accountability in delivering services, ensuring communities' voice (particularly women, children and the disabled) are heard in prioritizing services and creating a customer friendly environment, among others.

5.1.3.2 Process of improving access and quality to health services

5.1.3.2.1 Processes of improving access

Access to health service is critical to low income countries like Ethiopia. Access to health services denotes whether services are provided in specific geographic area that refers physical accessibility which can be measured by availability of health facilities and other inputs compared to the population. However, physical availability of health facilities might not guarantee utilization of health services as several factors such as perception of community towards health services, transportation, cost, waiting time, and poor service etc. may deter people for not using the health facilities that are physically available.

Remarkable progress has been made in improving access to primary health care units (particularly health centers and health posts) and health human resources deployment in the last one and half decade. Notable strides have also been made in increasing the number of primary hospitals in recent years particularly during HSDP IV. Even though the physical access for primary health care facilities has improved significantly, some of the health facilities are not providing the services that are expected to be provided at their level due to various reasons.

Per capita measures of outpatient visits and hospital admission reports indicated low service utilization compared to expansion of physical access of health facilities. Indeed it is not easy to collect adequate data on the barriers of utilization. Nevertheless, factors such as what services are offered at what location, direct and indirect cost of health care (e.g service fee for health care services and transport cost to get to health facilities), cultural issues, providers' attitude and competencies, patent/client preference and health seeking behaviour of community are believed to influence the health service utilization.

The fourth health sector development program (HSDP IV) delineates improved access to quality health care at all levels and at all times as one of the strategic results. This strategic result is ensured through supporting community to practice and produce good health and protected from emergency health hazards. The main concepts are promotion of good health (environmental and personal hygiene, nutrition, and exercise), prevention of disease, providing curative and rehabilitative services, and timely management of public health emergencies. To improve access to health service, the health service delivery is organized at

household/family, community and health facility level. These concepts aim to improve the following strategic objectives:

- community empowerment, ownership and positive health practice,
- improve maternal, neonatal, child, adolescent and youth health, nutrition,
- hygiene and environmental sanitation (WASH) and
- combat HIV/AIDS, TB and Malaria and other communicable and non-communicable diseases.

To attain these strategic objectives:

1) the HEP supported by health development army (HDA) serve at the base (household and community) level for health promotion, disease prevention and basic curative services through implementation of health extension packages and integrated community case management of diarrhoea, pneumonia, malaria, and sever acute malnutrition. HEP packages are implemented at household, community and health posts with referral network to health centers.

2) The health centres provide support the HEP for promotion of health, prevention of diseases and basic curative services alongside providing Basic Emergency Obstetric and neonatal care (BEmONC), treatment of TB, HIV/AIDS including PMTCT and other common illnesses and injuries. HCs serve as the first referral points for the health posts.

3) Primary and general hospitals are mainly providing curative services and comprehensive emergency obstetric and neonatal care services (CEmONC). Primary hospitals as part of PHCU are expected to support and serve as a referral points to their respective health centers.

4) referral and specialize hospitals mainly handling more complicated and specialized health care including treatment of non- communicable diseases.

5.1.3.2.2 Improve Quality of Service Delivery

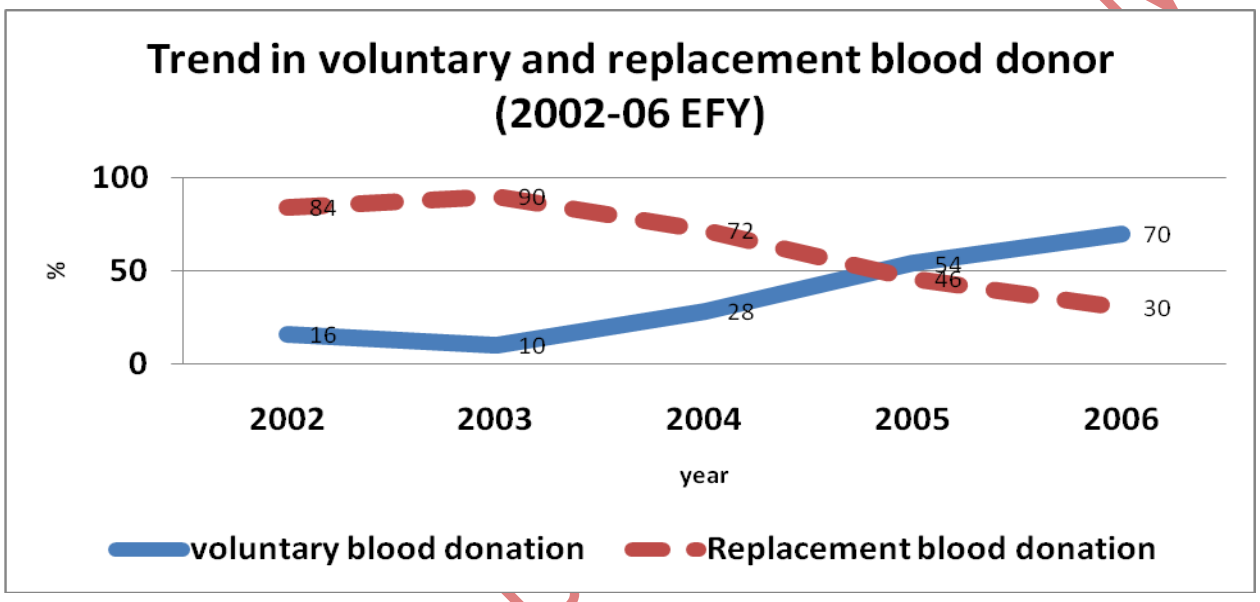
HSDP IV integrated the need to improve quality of health service delivery within the health facilities of the country. During this time increase in Customer satisfaction Index was noticed. During this period a Hospital Reform agenda focusing on implementing defined quality standards has been defined. Among 124 EHRIG standards, around 76% were achieved in EFY 2006. The hospital reform has brought positive improvements including reduced waiting time to 52 min and reduced institutional mortality rate to 4%. The bed occupancy, average surgical waiting time and patient satisfaction showed improvement in 2006 EFY to 75%, 10 days and 77% respectively.

The Ethiopian Hospitals Alliance for Quality (EHAQ) has been established aimed at sharing experiences among lead and general member hospitals for quality improvement. In EFY 2006, patient satisfaction cycle of EHAQ was closed, following the achievement of its goal, and a new cycle for promoting quality in service delivery has started. At the closing of the patient satisfaction cycle, the best performing public institutions (6 lead hospitals, 3 clusters, 11 general member hospitals, 2 hospitals, and one RHB) were awarded, after being evaluated through data driven and transparent approach. A similar reform and quality alliance need to be implemented for health centers.

In order to strengthen provision of blood transfusion services, a significant management reform has taken place, with transfer of overall management of blood transfusion services from the Ethiopian Red Cross to the

government. More than half of the hospitals are now accessing safe blood from the National Blood Transfusion Service and its networks. The contribution of voluntary blood donation has reached 63%. In EFY 2006, the number of functional regional blood banks increased from 12 to 25, with a total of 30 mobile teams collecting blood from the communities on a daily basis. These blood banks are strategically located to supply safe blood to all government and non-government health facilities within 150-200 Km radius of their catchment areas. Currently, the proportion of health facilities accessing safe blood and blood products from the NBTS and its network increased to 52%. In EFY 2006, the NBTS collected 87,685 units of blood, with a 46% increase from 60,090 in the previous year (Figure).

Figure 35: Trend in voluntary and replacement blood donation (2002-06 EFY)



To improve the quality of emergency services in Ethiopian public hospitals, a number of initiatives have been implemented, such as: (i) ambulance procurement, distribution and utilization; (ii) establishment of emergency command post; (iii) provision of training on basic and advanced life support; and (iv) strengthening of specialty care like intensive care unit, burn services, and trauma care services.

A number of undertakings are taking place in improving emergency care. In addition to provision of important trainings on basic life support, a total of 450 ambulances have been distributed in EFY 2006 reaching a cumulative total of 1,262 ambulances. Besides, different guidelines, such as Ambulance Management Guideline, First Aid Guideline, Intensive Care Unit Establishment Guideline, and Liaison Services Manuals, have been prepared. Furthermore, efforts are being made to improve the emergency medical system in Addis Ababa with an Emergency Services Strengthening Project with AA city administration to establish a city-wide coordination mechanism.

The Auditable Pharmacy Transactions and Services (APTS) Initiative is underway to improve the quality of pharmacy services in high volume hospitals. Through APTS, hospitals have established evidence-based, transparent and accountable pharmaceutical services and financial transactions. Moreover, the pharmaceutical services have become auditable, therefore reducing wastages of medicines, expiry rates as well as improving the quality of pharmaceutical care. Currently more than 30 hospitals from different regions have been implementing APTS with encouraging results.

According to the WHO laboratory quality ranking, every laboratory system is expected to fulfill the five levels of laboratory quality standards, ranging from one to five. As part of this quality standard mechanism, laboratories are participating in Strengthening Laboratory Management Towards Accreditation (SLMTA) trainings. Similarly, one laboratory participated in external quality control managed by international experts; whereas 22 laboratories participated in national laboratory quality control and standard assessment. About 156 laboratories have participated in Quality Control activities through provision of quality control samples (regarding chemistry and haematology, DNA PCR, viral load, and TB culture) as part of the on-going laboratory quality assurance mechanism.

As one tool of improving the quality of maternal health care and particularly care during pregnancy, child birth and the post-partum period, the MoH launched national maternal death surveillance and response (MDSR) system in May 2013 that was rolled out in phases for nationwide implementation. Initial reports are encouraging in terms of reporting and particularly locally responding to address avoidable cause of deaths. This system, once institutionalized, can also be used for tracking maternal deaths with the aim of counting each one of them and helping to achieve a more accurate estimate.

Despite improved access and efforts of quality improvement, the health service utilization remain below 0.4 OPD visit per capita per year. In EFY 2006, a total of 30,927,623 OPD visits were provided with an average of 0.35 OPD visit per person per year; this achievement was slightly higher than the performance in EFY 2005 (0.34 OPD visit per person per year).

Improving quality of health services remain a major area of focus for the years to come include strengthening emergency and referral services, enhancing diagnostic services, emphasis to effective coverage of high impact interventions and follow up of adherence to standards.

5.1.3.2.3 Regulation

Improving health and health related regulatory system focuses on ensuring safety in the delivery of health services, products and practices as well as accreditation of professionals. Among the promising achievements during HSDP IV in health regulatory aspects were, a number of regulation, guideline and standards were developed.

The regulatory authority is being strengthened at different levels. Absence of uniformity of the health regulatory structure at regional and woreda level, low attention to health regulatory system in some of the regions and focus was given on limited areas of health regulatory are some of the limitations observed in health and health related regulatory areas.

Although regulatory employees are deployed in the 15 ports entry into /exit out of the country, there are indications that there are still inflow and outflow of medicines from Ethiopia.

Given the fact that the nature and range of food items are very wide and difficult to register all types of foods, it is high time to develop a strategy to register and regulate food items that are frequently consumed and have significant public health impact. The regulatory authority conducts pre-license inspection and provides manufacturing permit for local food manufacturers but clear limitations are observed in assessing the safety and quality of foods prior to enter into the Ethiopian market.

A new medicine registration has been developed by formulating other countries experience that meet the demand for emerging infectious and non-infectious diseases. Although the authority has a guideline and provide pre-import permit for donated medicines, ensuring the safety, efficacy and quality of such products remain as critical challenge.

The quality control laboratory is furnished with different world class testing and analyzing devices. The advancement of the laboratory in different quality testing activities is improved from time to time. Although the initiation to start and strengthen branch offices' quality control laboratories is considered as substantial improvement, establishing mini-laboratories at each entry and exit ports is not yet started.

Ensuring of safety and quality of food items and medicines throughout the country is showing some improvement. However, the control of products at each entry and exit ports has been done traditionally only by physical inspection which are not assisted by modern technologies. The entrance and distribution of illegal products results in loss of trust even toward the regulated products. Inspection and control of importers, exporters, distributors, and retailers are improved through time. The initiation and attitude towards the control of illegal trade and conduct of post market-surveillance is considerably improved. However, the inspection process does not focus to ensure safety and quality of products which are frequently consumed by the public, and the post-market surveillance activities are limited to very few products. Emergency inspection has not been done regularly and randomly especially to control illegal trades. Regulatory collaboration and integration among federal to region, region to region and region to woredas are poor despite the administrative structure is stretched up to woredas. This results into misunderstanding among the administrative structures and created a gap in the overall regulatory functions.

In order to stabilize rational use of medicines, a number of continues trainings were provided as the authority is responsible in promoting patient and health professional awareness of drug risks and safe use. A number of bulletins, guidelines and pamphlets were prepared and distributed to users. Besides, a standardized prescription paper was prepared and distributed to many health facilities in the country. Although antimicrobial drug resistance is one of the biggest global healthcare challenge, the regulatory authority does not go ahead to minimize this serious issue in the country.

The required legal framework to control tobacco in the country is prepared according to the international agreements. The country's quarterly and annual consumption data of narcotics and psychotropic substances has been communicated to the concerned international organizations. However, illegal circulation of drugs of abuse, the high tendency of the youths to use drugs of abuse and the delay to implement tobacco control is a challenge and a limitation to the regulatory sector.

Health Institution National standard has been developed and discussed with responsible stakeholder for its effectiveness. Although many private health institutions are serving the public by respecting the rules and regulation of the country, a significant number of private wings are practicing illegally.

Licensing of health professionals who are considered in scarce in the market and who learnt from abroad are decided to be at federal level and others are licensed in their respective regions where they are practicing. This creates favorable condition in the follow up and regulation of health professionals as well as it minimizes the bureaucratic issues in the licensing process. Inspection of health professionals, establishment and strengthening of ethics review committee at regional levels and registration and licensing of new disciplines were a challenge to the sector.

5.1.3.2.4 Public Health Emergency preparedness and response

The health system is expected to cope with existing and emerging disease epidemics, acute malnutrition, and natural disasters of national and international concern.

The Ethiopian Public Health Institute (EPHI), formerly called The Ethiopian Health and Nutrition Institute (EHNRI) has established a Public Health Emergency Management (PHEM) since 2009 that is the responsible body for PHEM activities in the country.

The PHEM center provides laboratory support to public health emergencies in the identification of diseases or other emergency conditions. Integrated disease surveillance and response (IDSR) - a WHO regional strategy - is being implemented at all levels. Twenty Immediate and weekly reportable diseases are known at all levels.

A total of 2,217 public health emergency rumours were communicated to the EPHI in 2006 EFY and confirmed within 3 hours, with only 31 (1.4%) of them being found to be real public health emergencies for whom appropriate responses were undertaken. Ninety percent of public health epidemic cases had laboratory confirmation, and 80% of them were confirmed as important emergency and public health cases.

The implementation of the International Health Regulations (IHR) is well underway based on the recommendations of WHO. Recent assessment of IHR implementation has been conducted indicating that the country is on the right track to comply with the regulations. The preparation and readiness to potential threat of Ebola is commendable including setting up a laboratory in short period.

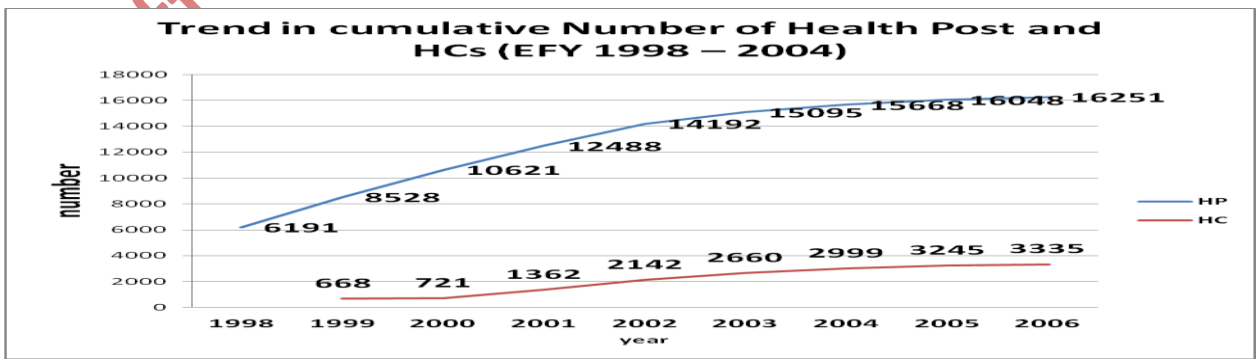
The PHEM system has some areas of improvement including multi-sectoral coordination apart from food security. Delays in sharing reports or notifying reportable diseases need to be improved At Woreda level the capacity for preparedness is limited due to lack of clear plan and budget allocated for emergencies. Communication is still a big challenge particularly in most remote districts which are also the Woredas most affected by emergencies. The lack of transport facilities in most Woredas limits response capacity for emergencies.

5.1.3.2.5 Infrastructure and ICT

Availability, accessibility, equity, efficiency and quality of health services depend on the distribution, functionality and quality of infrastructure. In improving this area the health sector attained some of successes which include the health facility construction has created access to care to many people that was never reached with any type of service before, the health centre expansion has enabled the sector to enhance access to services for programs. Potential health coverage has increased to 93% in 2005 EFY. While access to services has improved, because of the issues around functionality, health facilities are not able to provide some of the priority services such as deliveries in a manner that attracts mothers.

In EFY 2006, there were a cumulative number of 16,251 HPs, 3335 health centers (3315 of which are functional) and 156 hospitals (150 are functional). Besides, ongoing construction of 123 hospitals was reported from seven regions.

Figure 36: Trend in cumulative Number of Health Post and HCs (EFY 1998 – 2004)



HSDP IV strategic them on ICT use in the health sector has focus on four main areas: Tele-education, telemedicine and electronic health management information system (eHMIS) and Electronic Medical Records (EMR). In this regard, most of the preparatory work is being done. Much of the ICT contributions are expected to be seen in the years to come.

Health technology management including medical equipment maintenance is among areas that need to be enriched in the coming strategies.

5.1.3.2.6 Health Workforce

Effective health system is a function of multiple factors. Of which adequate numbers and mix of motivated and skilled human resources are essential at all levels of the health system. Due to effort made during implementation of HSDP IV, there are achievements made which include the expansion of medical education volume in terms of training capacity, increase in number of medical schools, and increase in annual intake of health professionals by universities. Encouraging achievements were made in production of HEWs and midlevel cadres such as nurses which are predominantly women in line with the focus to maternal and child health. However, some health professions are scarce. The efforts put in place few years ago are expected to produce more physicians, anesthesia professionals, midwives as well as other health workforce that can further be trained and deployed to improve quality if health care including in specialty services.

Pre-service Education

The health workforce density in Ethiopia has increased from 0.84 to 1.3 per 1000 population between 2008 and 2013 indicating improvement in supply and availability of health workers. However, the doctor, health officer, nurse and midwife to population ratio is 0.7 per 1000 population, far behind the minimum threshold of 2.3 doctor, nurse and midwife to 1000 population ratio required to ensure high coverage with essential health interventions.[45] The marked improvement in availability of health workers is due to massive scale up of production in the last two decades. Number of health worker training public higher education institutions has increased from 8 to 57. Of these, 34 are universities and hospital-based colleges offering degree programs while 23 are regional health science colleges offering technical and vocational qualifications (level 1 to 5). Private health science colleges have also flourished, with 24 institutions offering accredited programs as of 2012/2013. Specifically the number of medical schools has risen to 33 (of which 5 are private) and public midwifery schools have reached 49. There has also been parallel expansion in enrollment and graduation outputs. Over sixty thousand health science students were enrolled in public higher education institutions; and an additional 15,834 in private higher education institutions as of 2012/2013. Annual enrollment of health science students in public higher education institutions reached close to 23,000 (58 % in regional health science colleges) by 2014. In the same vein, annual intake of medical students rose by more than 2-fold from 1,462 in 2008 and to 3,417 in 2014[46]. Graduation output from health training higher education institutions also increased by close to 16-fold from 1041 in 1999/2000 to 16,017 by 2012/2013 (5,996 from public universities, 8,188 from regional health science colleges and 1,833 from private colleges).[47, 48, 49]

[45] MOH, 2014. Revised HRH Strategic Plan

[46] MOH, 2014. Revised HRH Strategic Plan

[47] MOE, 2013. Education Statistics: Annual Abstract

[48] MOE, 2000. Education Statistics. Annual Abstract

Ethiopia is on track in scaling up quantity of health worker production. However, capacity and readiness of higher education institutions to assure quality has not developed proportionally. Assessments of both public and private higher education institutions have revealed critical gaps in quality of education provision and competence of graduates. Mechanisms of competency tests are not yet matured to ensure students are graduating with essential competencies for safe and effective practice. Internal quality assurance systems for education of health workers are sub optimal. Educational infrastructure and resources particularly those required for skills learning are deficient. There is shortage of suitably qualified faculty, with the gap most severe in private health science colleges. Students do not have sufficient practical learning opportunities. Curricula are expected to shift from traditional, static, less practice-oriented approach to a 21st century skills like creativity, critical thinking, problem-solving, collaboration, communication, ICT, and cultural competency. Ethics, professionalism, and public health competencies are also not well integrated. There is also dissatisfaction with student motivation and preparation upon entry to health training programs [50,51,52, 53]

The Government of Ethiopia allocates up to 4.6% of its GDP, which is one of the largest in Africa. However, most of it is capital budget, with limited resources available to enhance the core mission of quality and relevance of higher education

Continuing professional development and in-service training

Even though there are guidelines and directives regarding continuing professional development and in-service training in the health sector, enforcement is yet to begin. Local capacity to develop, offer, enforce, monitor and evaluate relevant and quality CPD activities is under-developed. CPD is not yet linked to re-licensure and career progression. Some in-service trainings are not always need-based, well-planned, coordinated, quality assured, monitored and evaluated for its effectiveness. IST is mostly face-to-face and group based with limited use of innovative and efficient in-service training modalities like on-the-job training, and blended learning approaches.

Human Resource Regulation

Comprehensive, effective, efficient and fair HRH regulation ensures public protection and improves quality of health care. There are missing elements in the regulatory landscape. Public higher education institutions need to be subject to accreditation requirements similar to the private ones. The MOH, professional associations and other relevant entities are expected to be actively involved in accreditation of health workers training institutions. There is a need to have standard licensing, qualification or exit exam for health professionals graduating from university programs. There are concerns about validity and consistent implementation of certificate of competence assessment for low and mid-level healthcare providers. There is a need to put structures and processes in place to review ethics and competence of health workers at facility, district, and regional levels.

[49] Jhpiego, 2012. Strengthening Human Resources for Health Baseline Survey Findings.

[50] Jhpiego, 2014. Competence Assessment of Graduating Midwifery and Anesthesia Students: Technical Report

[51] Private Health Sector Program, 2012. Rapid Assessment of the Quality of Pre-service Education in Private Medical Colleges in Ethiopia.

[52] Jhpiego, 2012. Strengthening Human Resources for Health Baseline Survey Findings.

[53] HERQA, 2014. Revitalizing the Quality Assurance System for Education of Health Professionals in Ethiopia.

Human Resources for Health Management

HRH management is an integrated use of systems, policies, and management and leadership practices to recruit, maintain and develop employees to create access to quality health care to all people. Effective human resources management requires governance structures with adequate number of well qualified human resources management and leadership professionals who have capacity and motivation to assess HRH needs, develop and implement relevant policies, strategies and operational guidelines to ensure health workforce planning, development, recruitment and equitable distribution, career development, motivation, retention and performance.

Ethiopia has major HRH management challenges including shortage, urban/rural and regional disparities, and poor motivation, retention and performance. Human resource management is sub optimal as modern HRM concept and practices are lacking and HR functions are generally limited to traditional personnel administration attitudes and tasks. Due to limited efforts to modernize HR functions as strategic resource in health sector there is limited investment into HRM capacity development as evidenced by limited technical skills and experience of existing HR staff in HRM and leadership, inadequate HR structure and staffing at all levels, limited capacity and practices in strategic and operational HR planning and budgeting. HR policies and procedures are not accessible to all staff, and as a result, not consistently implemented. Human resources information system (HRIS) is not fully functional to support HR planning and development, supportive supervision, performance monitoring and improvement. There are also major gaps in performance management and accountability where strong system and practices are required to link performance planning/goal setting with monitoring and improvement and regular performance appraisal, rewards/sanctions and professional development needs. In-service training needs are not systematically reviewed to link with individuals/teams and organizational performance and there is little or no in-service training opportunities to develop HRH leadership and management skills.

5.1.3.2.7 Supply chain/Medicines and Health Technologies

Ethiopia has a national drug policy endorsed in 1993 and a proclamation (proclamation661/2009) which together are guiding and governing the pharmaceutical sector. However, the policy and legislation need to be revised to address the rapid demographic, social, political and economic changes the country is going through in recent years. Globalization, better recognition of the importance of preventing and treating chronic diseases, effects of environmental degradation, and new global public health threats contribute to the rationale for a review of the nation's health policy. Key institutions responsible to lead the coordination of multiple stakeholders, research and development, the synthesis and dissemination of pharmaceutical information and pharmaceutical services are lacking. Pharmaceutical retail outlets, importers and distributors are not being considered as key stakeholders of the health system and there is a lack of strategic partnership between the public and private sector.

The Ethiopian market for pharmaceuticals is still limited, around US$ 200 million, due mainly to low per capita income levels. The per capita GDP at PPP is estimated to reach only US$ 1101 in 2010 (Economist Intelligence Unit, 2009). The main source of drug expenditure in Ethiopia is household out-of-pocket expenses, which covers 47% of total drug expenditures. Donors, foreign governments and nongovernmental organizations (NGOs) cover the rest of the expenditure. Although recent figures are missing, in 2005–2006 private importers accounted for around 42% of drugs imported into Ethiopia, while the Ethiopian Government and donors imported the rest (Wamai, 2009).Estimates on the share of the market held by local producers of pharmaceuticals vary between 15 and 30% of the market. [citation needed]

Strategic geographic and market location, the possibility of multiple joint ventures, a relatively skilled labour force, and the presence of regulatory framework for drug manufacture and investment make Ethiopia an

attractive place for pharmaceutical manufacturing. At the same time, pharmaceutical companies in Ethiopia have identified various problems, such as the lack of uniformity in tax exemptions for imported raw materials irregular supply of electricity and hard currency shortages. Severe competition from low cost imports from large-scale Asian manufacturers remains a big challenge to local manufacturers of medicines.

According to a recent assessment made in 17 federal and Addis Ababa government hospitals, the availability of key medicines varies among hospitals, but results show that substantial improvement is required in this respect. The performance of both public and private importers in supplying medicines in response to hospital requests is poor (44.7%). The availability of key medicines at the dispensaries of these hospitals at time of visit ranged from 33.3% to 100%. Dispensing practices were found to be in very bad shape. For example, the average counseling time was a mere 43 seconds, labeling of medicines was very poor, and only 50% of the patients interviewed knew how to take their medicines properly. Despite these results, overall patient satisfaction with pharmacy services was rated at 74%.

With the aim of increasing the availability of health commodities at an affordable price in usable conditions, the sector procured pharmaceuticals, medical supplies and equipment through the Revolving Drug Fund (RDF) and the various programs, is increasing over time.

Annual distribution value increased from 600 million Ethiopian Birr to 6.6 Billion birr in five years after the establishment of Pharmaceutical Fund and Supply Agency (PFSA). Seventeen modern warehouse are almost complete raising the national storage capacity to 320,000 meter cube from 30,000 five years ago and the cold chain capacity will grow to 600 Meter cube from 50.

5.13.2.8 Health Information system

The health information system requires managing the health information through health management information system (HMIS), research and development (R&D) and knowledge management (KM).

HSDP put this strategic objective to support improved evidence-based decision making through enhanced partnership, harmonization and alignment, including integration of projects and programs at the point of health service delivery. It will comprehensively address identification of health system bottlenecks; research; HMIS; performance monitoring; quality improvement; surveillance; use of information for policy formulation, planning, and resource allocation. The performance measures include: Increase timeliness and completeness of HMIS reports from 57% to 90%; Improve correspondence between data reported and recorded from 15% to 90%; Maintain proportion of Woredas with evidence-based plan aligned vertically and horizontally at 100%; Increase proportion of partners implementing "one-plan" to 100%; Increase proportion of Health Development Partners providing funds through MDG-PF to 75%; and Increase proportion of partners using the national M&E framework.

The sector therefore showed significant achievements in the processes around planning, budgeting, decentralization, the review of plans and progress, the involvement of partners and other stakeholders in the planning and review processes, and the role of information.

Woreda Based Planning (WBP) is now the formal planning process in most regions. Planning is taking place at different levels, involving more stakeholders, such as the head of health centres, community representatives, NGOs, community leaders, administrative leaders and development partners. There is an increasing emphasis on gender issues in the WBP, including in trainings, reports and MNCH. There are various positive impacts of the WBP process, such as increased ownership, growing participation and collaboration at different levels. WBP has contributed to the alignment and harmonization of the planning, budgeting, resource allocation, prioritization, tracking and reporting systems. WBP has improved access and awareness of various issues such as related to capacity building, CEmOC, BEmOC and others. WBP has

helped to provide evidence for resource allocation, in detailed activity based planning, and more flexibility in reprogramming.

Strengthening of budgeting processes: While there is an increased understanding of governmental budgets, partner budgets are not well understood in terms of priorities and trends. Gaps in budgets due to lack of support by development partners is increasingly addressed by internal budgets. There is better adherence to processes of one plan/one budget/one report, though one report has been not fully realized in practice. There are visible improvements in linking plans, activities, costs and evaluation. With a stronger partnership forum and political commitment, there is improved communication among stakeholders. While there are appropriate structures in place, and processes for monitoring, these are constrained by shortages of manpower and budget.

Research activities are conducted by several research institutions, partners and Ministry of Health. Research and development has however been hampered by an uncoordinated priority setting of the research agenda, inadequate funding, shortage of human resource and inadequate logistics. Other challenges include the lack of a national database for accomplished research, hence rendering it difficult to access and limiting translation of research findings into policy. In addition, there is little collaboration amongst different research institutions, and poor linkage between research and formulation of policy and strategy.

Knowledge management is lacking in the health sector. Knowledge management is the systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical & strategic requirements; it consists of the initiatives, processes, strategies, and systems that sustain and enhance the storage, assessment, sharing, refinement, and creation of knowledge. Knowledge management (KM) therefore implies a strong tie to organizational goals and strategy, and it involves the management of knowledge that is useful for some purpose and which creates value for the organization. Little emphasis has been given to KM so far evidenced by loss of institutional memory or tracing documentation in major undertakings.

5.1 3.2.9 Health Care Financing

Financial resource is a crucial input for provision of adequate and optimum quality health services. However, the ever increasing cost of health care and multiple competing priorities in resource poor countries makes financial resources insufficient to make substantial improvements in access and quality of health care.

The strategic objective sets out in HSDP were following proactive approaches to the mobilization of resources from domestic and international sources. It includes enhancing pool funding; addressing collection and use of revenues by health institutions; and establishing a risk pooling mechanism. It also includes attention to effective and efficient use of resources; sound financial and program management leading to performance-based financing; as well as equitable and evidence-based allocation of resources to priority interventions and programmes in the health sector.

National Health Accounts (NHA) showed that total spending on health has been growing steadily. In 2010/11, it reached ETB 26.5 milion (US$ 1.64 million) from ETB 11.1 million (US$1.2 million) in 2007/08. The fifth round NHA revealed that nominal total health spending on health grew by 138% in 2010/11 compared to the total spending estimated in the fourth round NHA in 2007/08. The fifth round of NHA found that per capita health expenditure increased from US$ 16.10 in 2007/08 to US$ 21 in 2010/11. The Per capita spending on health grew five-fold from US$4.07 in 1995/96 largely due to the aggressive efforts to mobilize international funding and implementation of health care financing reform (HCFR) in the country. The reforms in HCF aim to increase health resources, protect the poor, and introduce equitable financing mechanisms. These reforms are now being implemented in the majority of the regions that have

more than 80% of health facility coverage. However, the increment is short of HSDP IV target of increasing total health spending from 16.1 USD/Capita to 32.2 USD per capita.

According to NHA-IV, the share of health expenditure out of the country's Gross Domestic Product (GDP) reached 5.2% of the country's GDP in the same year[54,] which is a significant increment from the 4.5% in 2007/08. This is acceptable level as it is above the WHO recommendation of minimum of 5% of GDP spending on health. However, the share of total public sector health expenditure against the country's total government expenditure though remained low; it reached 5.6% in 2010/11 which is a modest increment from its 5% share in 2007/08[55.]

According to the health sector reform, improving Retention and Use of Health Care Financing Reforms (HCFR) is one of the key financial mobilization strategies. HSDP IV has set a target of increasing the proportion of public health facilities retaining and using their revenue from 20% to 100%. Since the start of implementation of the HCFR, regions formulated proclamation, regulation, directive, and implementation manuals to align with the national strategy. It is being implemented in 2,241 health facilities (90 hospitals and 2,151 HCs) in seven regions (except Somali and Afar) and two city administrations.

The amount of retained revenue generated in health facilities varies from facility to facility and from region to region. On average health centers generate 30% of their total budget while hospitals generate 23% from retained revenue. Hospitals on average retained ETB 1.56 million per year, while HCs retained ETB 0.37 million. The retained revenue has improved availability of essential medicines, diagnostic equipment and medical supplies. It is also used for renovation and expansions of rooms and staff housing. Besides the health facilities were able to cover significant proportion of utility bills, making water and electricity available (HSDP Mid Term Review, 2005 EFY)

There has been improvement over the last years in government allocation for fee waiver to facilitate access. Total subsidy for the poor has reached more than 20 million Birr so far. The number of fee waiver beneficiaries has also reached 2 million. While this progress is encouraging, it constitutes less than 10% of the total population that lives below the poverty line in the country. Significant variation has also been observed in the amount of waiver allocated per capita in different regions. This ranges from 2 Birr to 67 Birr per capita, questioning the adequacy of the waiver to cover the cost of health services consumed by the beneficiaries. Other challenges associated with the waiver system in some regions include delay in issuing identity cards to targeted households, lack of contract between local governments and health service providers, and delay in reimbursement of funds to health facilities. Maternal and child health services (ANC, delivery, PNC and immunization etc) are among the exempted health services. One of the challenges observed in some facilities visited is shortage of budget to make available drugs, medical supplies and equipment's for these services (HSDP Mid Term Review, 2005 EFY)

[54]Ministry of Finance and Economic Development, Brief Note on the 2003 EFY GDP Estimate Series, accessed on August, National Account Statistics GDP Estimate for Ethiopia Fiscal Year 2003 indicated that the total GDP of the country in the reporting year was ETB 511.156 Billion.

[55] The National Bank of Ethiopia, Annual Report for 2010/11 showed that total government expenditure in the reporting year was ETB 93.8 billion of which ETB 19.992 billion was from grant and the rest from internal revenue and loan. Since efforts are made to track all grants to health sector and show the source as rest of the world (donors), the total government spending from domestic sources and loan is ETB 78.414 billion.

Outsourcing of nonclinical services in public hospitals is another core element of the HCFR to enable health facilities focus on core business while improving efficiency in the system. Reports indicate that increasing number of health facilities have outsourced none-clinical services to the private sector.

Private Wings in Public Health Facilities has shown positive development, particularly in terms of reducing the attrition and absenteeism of health workers. At Federal level and in the Regions, public hospitals are allowed to open and run a private wing with the primary objective of improving health workers' retention, providing alternatives and choices to private health service users, and generating additional income for health facilities. So far 31 private wings have been operationalised in 5 regions and in Federal Hospitals. The average number of patients served per quarter ranges from 50 to 2,916, with the overall average being 1,492 patients per quarter. Though the private wing arrangement is giving option to clients in accessing healthcare and retains senior staffs to hospitals, the health sector needs to pay close attention through systematic monitoring, identification and tackling of hitches (HSDP Mid Term Review, 2005 EFY)

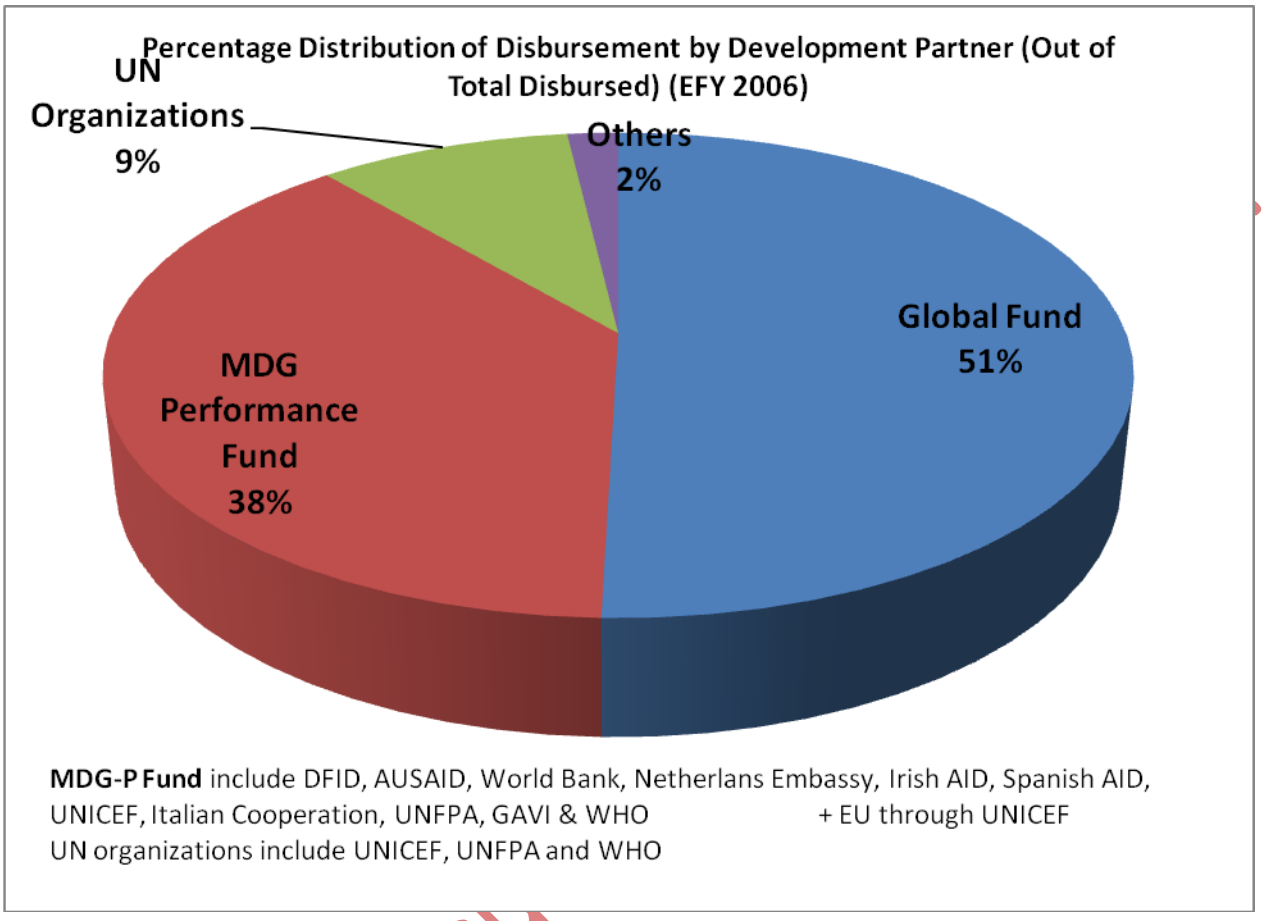
Government's efforts to address the challenge of high out of pocket (OOP) spending during use of health services include the introduction of CBHI and SHI for the informal and formal segment of the society, respectively. HSDP IV sets a target of increasing the proportion of people enrolled in health insurance from 1% to 50% and start and finalize a pilot test of CBHI in selected districts. The Ethiopian Health Insurance Agency (EHIA) has already been established and staffed. The agency is undertaking the necessary preconditions to kick start SHI. While this is a manifestation of the Government's commitment to accelerate the implementation of social protection in general and SHI in particular, there are crucial factors that are being looked into to improve readiness of the healthcare system to bear the potential demand created by launching SHI.

CBHI schemes have been piloted in 13 districts in Amhara, Oromia, SNNP, and Tigray Regional States. Regions have put in place the necessary administrative and coordination structures and provided trainings, periodic reviews and other resources. The introduction of CBHI and SHI is seen as vehicle for progressing toward UHC in Ethiopia as envisaged by HSDP IV. Taking the lessons of the HCFR, the Health Care Financing Strategy is revised in light of the recent developments in the health financing landscape (both within and outside the country) and evolving concept of UHC.

Contribution of development partners in the Health Sector

In EFY 2006, a total of USD 558.33 million was committed and a total of USD 612.87 million (109.8%) was disbursed, which was above the disbursement in EFY 2005 (531.13 million). This figure does only account disbursement through channel-2.

Figure 37: Proportion of disbursement by development partner (2006 EFY)



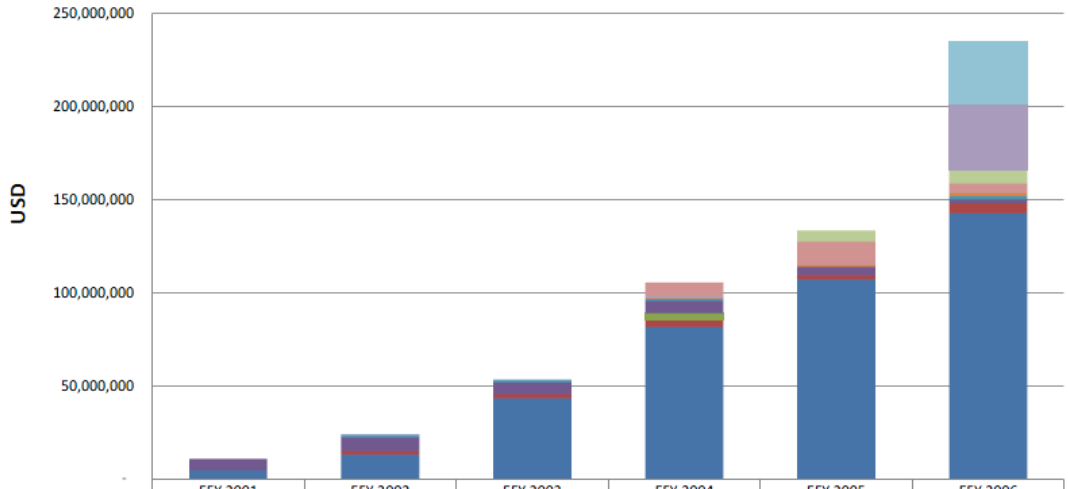
The MDG Performance Fund (MDG PF) is a pooled funding mechanism managed by the FMOH using GOE procedures. In the framework of the Ethiopia International Health Partnership (IHP) Compact, it provides flexible resources, consistent with the "One-plan, One-budget and One-Report" concept, to secure additional funding to the HSDP. It is one of the GOE's preferred modalities for scaling up DP assistance in support of HSDP.

Joint Financing Arrangement (JFA) refers to the arrangement that sets out the jointly agreed terms and procedures for MDG PF management, including planning, financial management, governance framework and decision-making, reporting, review and evaluation, audit and supply chain management. As per the JFA, the MDG PF covers all program areas where there is a funding gap, with the exception of salaries or wages. However, in the past five years the MDG PF has covered mostly the procurement of public goods required to facilitate the health service delivery at the lower levels.

In EFY 2006, three additional donors have joined the MDG PF: (i) the World Bank through Program for Result (PforR); (ii) GAVI with its Health System Strengthening (HSS) Support; and (iii) European Union (EU) through a new approach to channel the first three year fund (21 million Euro) through UNICEF to MDG PF in support of the MCH program. All these contributions will follow the management principles set out in the JFA. EU signed the JFA in EFY 2006, while WB has not yet signed it. The number of partners contributing to the MDG/PF has increased from 6 to 12 over the last three years. The amount of resources

coming through the MDG/PF has also increased from year to year. This shows improvement in channeling of funds through the preferred channel from 35% to 42% over three years period. This is a meaningful achievement both for Government and DPs in improving harmonization in financing of the health sector. Areas financed by the MDG/PF also align well with the priorities of the health sector. Maternal health, equipping of health facilities, child health and prevention and control of diseases are the top ranking areas of resource allocation.

Figure 38: MDG Performance Fund Disbursement (2001 – 2006 EFY)



	EFY 2001	EFY 2002	EFY 2003	EFY 2004	EFY 2005	EFY 2006
GAVI						33,420,034
World Bank						35,393,073
Netherlands Embassy					5,714,275	7,142,827
AusAID				7,445,900	12,561,360	4,973,250
WHO		664,303	300,969	698,773	-	148,337
UNICEF				500,000	1,000,000	1,500,000
UNFPA		1,000,000	1,000,000	995,189	-	2,000,000
Spanish Aid	6,210,964	7,351,996	6,416,510	6,846,500	4,547,543	2,022,548
Italian Cooperation				3,793,853	-	-
Irish Aid		1,924,660	2,217,960	3,484,285	2,447,777	5,523,618
DFID	4,407,268	12,934,392	43,314,566	81,577,544	106,964,000	142,558,200

Utilization of Resources / Grant Management Unit (GMU): Significant improvements have been observed in utilization of resources but more capacity needs to be built at sub-national levels. HSDP IV set a target of increasing the ratio of health budget utilization to allocation at 90%. Engagement of the leadership at all levels of the health system to track resources and ensure liquidation has played a significant role. A commendable initiative in resource utilization and timely liquidation is the establishment of the Grant Management Unit (GMU) under the Finance Directorate in FMOH. The unit was created to solve the hurdle of delayed liquidation of significant amounts or resources both at national and sub-national levels. The unit aims to track both physical and financial performance of the sector, enhance liquidation of funds and improve coordination between DPs and the FMOH.

IFMIS: Another key initiative in the sector is the IFMIS which aims to improve public finance management through improved evidence, integration and coordination. The system is fully electronic in design and expected to use a dedicated line in Woreda-net. It is a multi-sectoral initiative led by MOFED. Health sector has been chosen to be one of the pilot sectors. The health sector IFMIS has been designed and is being implemented at FMOH level. It has not been scaled up at sub-national levels. The scaling up of IFMIS to sub-national levels has been delayed due to budgetary constraints.

5.1.3.2.10 Leadership Management and Governance

As part of civil services reform programmes, the Government of Ethiopia (GOE) implemented Business Process Re-engineering (BPR)[56] in the health sector to establish customer-focused institutions, rapidly scale up health services, and enhance the quality of care. The BPR has changed the FMOH structure, and has shifted direct responsibility of specific programs. With the BPR, Ethiopia has increasingly decentralized oversight and management of its public health system to the Regional Health Bureau (RHB) level. In coordination with the reforms, training has been provided to managers and technicians at all levels. In Ethiopia almost all regions have endorsed the legal frameworks to introduce hospital boards and health center governing bodies/management committees. The existing structure at the FMOH and RHBs can facilitate federalization and decentralization. Especially the endeavors at the federal level to examine the effectiveness, efficiency, equity, and sustainability of health services and engaging local stakeholders in a conversation on these issues through various forums including review meetings, community forums, and others are exemplary.

The Ministry of Health and Regional Health Bureaus has also taken huge steps to transfer some of its responsibilities, authority, power, and resources to local levels. This transfer of responsibilities creates opportunities for effective governing at local levels. Effective governing at local levels will facilitate the work of men and women health managers and health workers in the districts and facilities. In order to improve the governance structure at points of service delivery, the government introduced facility governance boards constituting various relevant bodies at the local level.

As part of varies assessments, leadership, management and governance capacity building efforts are recommended to address critical gaps in the health sector. These areas of improvement include: capacity to implement decentralized health system; improve utilization of health services; systematic follow-up on implementation of policies, guidelines, standards and protocols; timely implementation of reforms; enhance coordination of public-private partnerships in health.

The 2013, baseline assessment[57] of LMG project indicated that; of the assessed directorates/ units, /core processes in 42% (n=59) of these units; the leadership practices found to be moderately keen that demonstrates better coordination of programs, scanning their internal and external environments, regularly assess the capacity of staff to provide challenge, feedback and support and good participation of staff in prioritizing key activities and align and mobilizing stakeholders for shared vision. It was also noted that the BPR, BSC and other initiatives are contributing positively for the improvement, but the pace of roll out is still remain slow. It was remarked specifically with BPR, that the degree of commitment of top management is fairly high; the awareness and the attitude of employees as well as the management is moderate which is accompanied by significant commitment gaps and resistance to change; suboptimal IT infrastructure; and areas of improvement on evaluation and monitoring of public health programmes were also indicated. The assessment continues to indicate that though 54% of directorates/ units found at moderate stages in terms of good governance practices, 34% found at the low level of governance practices where a lot of efforts needed to improve accountability, stakeholders' involvement (including addressing gender

[56] HSDP IV 2010

[57] LMG Ethiopia baseline assessment 2013

issues in health programmes), and transparency in making key decisions affecting the people's health. More importantly it was found out that inadequate efforts exerted in the health sector to sustain a culture of integrity and openness that serves the public interest. The Balanced Score Card (BSC) is a planning, monitoring and communication tool that fosters accountability as a team and individual through linking initiatives and activities to organizational objectives.

During the health sector plan reviews, it was noted that FMOH-RHBs joint Steering Committee, FMOH-HPN Joint Consultative Forum and the Joint Core Coordinating Committee have been functioning very well. The FMOH-RHBs Joint Steering Committee that is chaired by the Minister meets regularly (every two months) to promote and monitor the implementation of HSDP Harmonization Manual and varies reforms amongst other strategic objectives of the HSDP IV. It was also noted that strong leadership and governance is important to be more successful in implementation of one plan, one budget and one report (M&E) framework.

The FMOH-Donor Joint Consultative Forum and JCCC meetings have been regularly functional with the JCCC focusing on technical and operational issues. The FMOH has been championing investments to strengthen supervision and governance at the hospital level, including the development of supervisory and performance improvement teams at the regional and city level (i.e., the Curative and Rehabilitative Core Process Teams), implementation of health management information systems, planning and reporting processes, and the building of hospital governing board capacity.

The impacts of health care investments in countries like Ethiopia are typically measured by inputs and general health outcomes. Measures of performance that reflect whether health systems are meeting their objectives; public resources are being used appropriately; and the priorities of governments are being implemented. In Ethiopia per capita spending on health in 2010/11 was only $20.77[58], far less than the World Health Organization (WHO)'s recommended US$60 by 2015 (WHO 2010b). Pursuant to this, the Ethiopian government has introduced a wide range of health financing reforms aimed at increasing financing for delivery of essential health care services, and thereby improving quality and equity in provision of health care. These reforms, which include retention and use of internally generated revenue in government-owned health facilities, are indeed generating additional resources, which have been used to improve quality. As part of ensuring the resources are efficiently used to improve the health of the people; the efforts of ensuring good governance should be further strengthened in managing these resources in ways that contribute to the achievement of policy goals, and strengthen health systems at all levels.

5.1.3. 2.1 key successes and their contributing factors in the health sector

As discussed above, Ethiopia has come a long way in improving health status of its people evidenced by achievements or remarkable progress in MDGs, other health and health related parameters. Access to services has improved drastically as the result of capacity building efforts in improving health system inputs and processes. The main drivers for the success were strong leadership, community empowerment and better financing.

[58] Ethiopian National Health Account 2014 FMOH

The Government of Ethiopia has demonstrated strong leadership in the past two decades evidenced by its comprehensive and pro-poor national policy; country lead strategy development and effective coordination in implementation. The 1993 national health policy emphasizes access to a basic package of quality primary health care services by all segments of the population, using democratized and decentralized health systems. Following the national health policy, a twenty-year health sector development strategy has been formulated and implemented through a series of five-year plans (HSDP I-IV). The presence of country owned, focused and pro-poor health policies and strategies as well as commitment and effort of the government towards primary health care coupled with the positive socioeconomic development have played synergistic effect to achieve a better health outcomes compared to our health profile in 90's. Massive effort of the government have been stepping up especially during the last decade by setting ambitious targets, designing innovative and scientifically proven high impact interventions and taking actions at full scale. As the result of these, the government made a massive investment to strengthen the health system capacity by increasing production of health workers, improving logistics supply and expansion of health infrastructure, especially building new health posts, health centers and hospitals. Health science colleges have increased hugely. These investments greatly improved the health system capacity and increased access to health services. Furthermore, the Health Extension Programme (HEP) and all effort made throughout the implementation of HSDP is testimony of the government's political commitment, which helped to the accelerated expansion of PHC coverage.

The people of Ethiopia played extraordinary role in the successes observed today. The entire community has shown solidarity in moving their own health agenda forward by implementing HEP at household and community level. The HEP is an innovative community-based strategy to deliver preventive and promotive services and selected high impact curative interventions at community and household levels. The Health Extension Program (HEP) played a pivotal role in improving accesses to essential services in addition to creating awareness and demand for health care services. Access to ICCM, immunization, FP services including implanon, ANC, PNC, community based HIV, TB and malaria care has significantly improved by deploying more than 38,000 Health extension workers in more than 16,000 kebeles. Furthermore, the Ethiopian Government is undertaking the implementation of the Health Development Army (HDA) to promote participatory community engagement and empowerment so as strengthen the gains of the HEP. The HDA, besides its importance for the awareness and demand creation, it is the key to community empowerment in order to ensure the continuity and sustainability of health programmes through community engagement in the administration and regulation of their respective local health facilities and community health interventions. To date, there are half a million (a total of 442,773) HDA groups and more than 2 million (2,289,741) one-to-five networks. The HDA groups and networks are expected to extend their sphere of influence to other health programs similar to progresses observed in the areas of maternal health and hygiene and sanitation.

Alongside exorbitant community participation and strong leadership, better resource was mobilized for the health sector through a strong partnership of all stakeholders in the principles of harmonization and alignment. The collaboration with the development partners has contributed hugely for the successes in the health sector in particular and socioeconomic growth of the country in general. The partnership has enabled convergence of all sorts of available resources towards common agenda resulting in more life saved and much more disabilities were averted.

All in all, effective partnership of the people, government and development partners has paid of its fruit laying a more favorable ground for even more yield.

5.2. Anticipation of the future

The envisioning exercises have looked into experiences of middle income countries to learn potential health issues in the future as the country joins middle income countries. Assumptions are based on anticipated health transitions as the result of transformation into industrialization led economic growth, urbanization, climate change, globalization, advancement of technology and other socioeconomic dynamics.

5.2.1 Lessons learned from other countries

5.2.1.1 Inputs from experience sharing meeting

The Convening on Primary Health Care in Boston, July 2012

In addition to the Situation Analysis, a team from Ethiopia including members of the Visioning Committee attended an international convening facilitated by professors of Harvard and Yale universities. The convening was held in Boston in July 2012 to compare experiences in developing Primary Health Care across a number of countries. Faculty and practitioners from the World Health Organization (WHO), Harvard University, and Yale University provided an introduction to the convening, including a conceptual framework for understanding Primary Health Care; an overview of Primary Health Care in the context of national development and health systems development; and key domains for capacity development and sustainability of primary health care delivery.

In planning the convening, country experiences were selected after consulting experts in WHO, World Bank, OECD, and academia to represent countries perceived to have developed successful Primary Health Care systems, different models of Primary Health Care systems, and a range of different current levels of development. In addition to Ethiopia, three countries (Brazil, Estonia, and Sri Lanka) presented their experiences, key innovations, and timelines for development of their Primary Health Care systems. To conclude the convening, panelists from South Africa, Thailand and the Organization for Economic Co-operation and Development (OECD) shared reflections from the case studies and lessons learned globally in developing Primary Health Care delivery systems. The Convening report **(Appendix C)** presents a summary of each session, focusing on the unique characteristics of Primary Health Care delivery systems in four countries (Brazil, Estonia, Sri Lanka and Ethiopia).

There were six key messages distilled from the convening meeting:

1. **Context Matters:** In developing Primary Health Care systems, context matters tremendously in the type of system that gets developed. Important factors include the historical development of Primary Health Care organizations (clinics, community workers, hospitals, etc.); the role and influence of government administrators and medical and paramedical professionals; the political history of the governance systems; and other factors. There is no single right system; systems must be fit to their context. That said there are important lessons to be learned about how to make systems more effective and efficient even in different contexts.
2. **Coordination is Crucial:** Effective Primary Health Care systems are about more than just improving specific health indicators, such as those related to the MDGs, and indeed about

more than just health. Financial protection and citizen satisfaction are important outcomes for effective Primary Health Care. Many health systems elements need to be developed in a coordinated way to create effective Primary Health Care. Just providing inputs such as staff, building, and supplies; or just implementing financial incentive schemes or new management and information systems is unlikely to be sufficient to create an effective Primary Health Care system. A coordinated approach involving multiple elements is needed.

3. **Vision Must Meet Feasibility:** The WHO report on "primary health care" in both the 1978 and 2008 versions provide an inspiring vision. But countries at different stages of economic and health system capacity must adapt that vision to a feasible strategy of achievable outcomes and health system development. Primary Health Care system development strategies must combine ambitious vision and rigorous practicality.

4. **Understand and Engage "The Community":** Engaging citizens, beneficiaries, and the community have been shown to be key elements of developing successful Primary Health Care. This should include, at least, attention to the demand-related aspects of access and use of priority services, as well as potential community roles as both providers and monitors/regulators. While thinking of community engagement, one should try to avoid an overly "rose-colored" view of what "the community" is – it is important to keep in mind that in many countries social disparities and other intra-community divisions are important issues that can also impede the development of effective Primary Health Care systems.

5. **Generate Further Learning from Case Studies along the Development Continuum:** The convening meeting illustrated the value of more in-depth case studies. Even successful systems can be quite different in their design and operation. Countries designing or adapting their Primary Health Care system would benefit from documentation of the development and evolution of Primary Health Care systems along the path of economic and social development. Such documentation has been relatively rare, so that our evidence base is often "pre" and "post" but little about what happened in between.

6. **Define Characteristics of Primary Health Care Systems:** More work is needed to develop systematic definitions and measures of the "characteristics" of Primary Health Care systems. Recent work by the OECD is an important advance in this area. We need to take this forward more in lower and middle-income countries. The objectives of more case studies and unpacking of Primary Health Care characteristics should not be to identify one preferred model, but rather to understand better the lessons of different experiences. Meetings such as this convening could form the seeds for a future network of research and policy development on the development of Primary Health Care systems.

5.2.1.2 Comparison for Economic Growth and Development status with middle income countries

The MOH assumed that most of the targets of the Ethiopian Growth Transformation Plan (GTP) would be achieved by end of 2015 and that the performance in these targets would continue to be consistent with performance in the average lower-middle income country by 2025 and the average upper middle-income country by 2035. To account for the anticipated demographic and epidemiologic transitions that occur with development, benchmark performance was identified in

several economic growth and development indicators **(Table 4)** and burden of non-communicable diseases **(Table 5)** based on the average experience of lower-middle income countries of upper-middle income countries. Where possible, Ethiopia's GTP and HSDP IV targets have been presented as well. The Visioning Committee recognizes that further work is needed to develop the right benchmarks for comparing Ethiopia's performance against other countries' performance, and to adjust targets to reflect Ethiopia's achievements to date. Averages from large groups of countries based on their income cannot be sufficiently sensitive to Ethiopia's unique conditions. This work will be addressed as part of the ongoing development of strategies by the FMOH, based on specific Ethiopia conditions and criteria

Ethiopia has not set targets for the anticipated declines in external support of health spending, though based on the experiences in other countries, as overall development occurs, external support declines. The Visioning Committee believes that, while Ethiopia's external support for health spending will decline as the country continues to develop, significant support to achieve the health outcomes of a LMIC will continue to be needed. Currently more than a third of the health expenditure of Ethiopia is supported by external funding while the average share of external funding for Lower Middle income and upper middle income countries is 2.5% and 0.3% respectively. Hence, further work need to be done to show projections and better inform financing of the future health sector strategies.

Table 4. Comparison for Economic Growth and Development Indicators (Numbers in bold exceed the current performance of both LMIC and UMIC)

Economic growth and development	**Ethiopia Current Performance**[1]	**Current Average LMIC**[1]	**Current Average UMIC**[1]	**GTP 2014/2015 Target**
Percent of population living in urban areas	17%	39%	61%	-
Road density (km of road per 100 sq. km of land area) (2007)	4	27.7	48.2	12.37[4]
Access to electricity (% of population) (2009)	17%	64%	87%	75%
GDP growth (annual %) (2010)	11.2%[9]	5.14%	3.87%	**11.2%**
Improved water source (% of population with access) (2010)	44%	84.4%	93.7%	**98.5%**[5]
Adult literacy rate (% of those 15 yrs+ (2010)	66%[2]	71%	82%	**95%**
Telephone lines (per 100 people) (2011)	0.98	8.96	19.40	-[6]
Internet users (per 100 people) (2011)	1.1	20.3	38.7	7.4[7]
Health investment per capita (in 2005 international $; purchasing power parity) (2011)	$52[8]	$253	$794	$101[8]
Percent of total health spending supported by external donor funding (Ethiopia:2007, LMIC & UMIC: 2010)	39%[3]	2.5%	0.3%	-
Per capita investment in health from external sources, PPP[9]	$20.28	$6.33	$2.38	

Note: Ethiopian GTP targets that appear in **bold** exceed the current performance of both LMIC and UMIC.
[1](World Bank, 2012b).
[2](Ethiopia Central Statistical Agency and ICF International, 2012)
[3](FMOH, 2010)
[4]In the GTP, the target was 123.7 km/1,000km^2, and therefore adjusted accordingly.
[5]This target is for potable water coverage.

[6]The GTP did not have the target for telephone lines per 100 people. However, the mobile density target is 8.5 per 100 people (in 2009/2010 this was 1.5 per 100 people) and the number of fixed telephone subscribers is set for 8.6 million (in 2009/2010 this was 1.2 million).
[7]The actual target for Internet users in the GTP is 7.17 million people. Ethiopia's population in 2010 was around 85 million (Population Reference Bureau, 2010), and with a population growth rate of 2.6% as expressed in the GTP, this means that according to the GTP target it is estimated that 7.4 out of 100 people will be Internet users by 2015.
[8]The current health expenditure and target expenditure for 2015 visioning documented in HSDP IV were $16 current USD and $32.2 current USD respectively. These values have been converted to 2005 international $, purchasing power parity, in order to be comparable with LMIC and UMIC values.
[9] Calculated by multiplying the per capita health expenditure by the percent of total health spending supported by external donor funding.

Table 5. Comparison for non-communicable disease burden indicators

Non-communicable disease burden[4]	Ethiopia Most Recent	Current Average LMIC	Current Average UMIC
Adult cancer prevalence (per 100,000), 2008[2]	**224**	315	544
% of adults living with diabetes, 2011[3]	**3%**	8%	10%
Raised blood pressure, (age-standardized estimate) (2008)[1]	41.1	39.1	42.2
% Obese (BMI>30, age standardized), 2008[1]	**1%**	16%	20%

Note: Ethiopian performance indicators that appear in **bold** exceed the current performance of both LMIC and UMIC. It is expected that as Ethiopia develops, the non-communicable disease burden will increase, putting additional strain on the Primary Health Care system, which will be an important factor to consider in planning.
[1] (WHO 2012b)
[2](Bray et. al., 2008)
[3] (International Diabetes Federation, 2012 and 2012b)
[4] Although epidemiologic data are inconsistent, mental health issues continue to be a critical cause of disability and will require resources to address as Ethiopia develops. According to a study of 28 countries worldwide, the inter-quartile range (IQR: 25th-75th percentiles) of lifetime DSM-IV mental health disorder prevalence estimates is 18.1-36.1% (Kettler et. al, 2009).
[5] (Wjyst and Boakye, 2007)

According to a verbal autopsy study on burial surveillance in Addis Ababa, 51% of deaths were attributed to non communicable diseases followed by 42% died of communicable diseases. Injuries contributed to 6% of the fatalities. This finding indicates Addis Ababa is affected by double mortality burden due to non communicable and communicable diseases. As urbanization is increasing and life span improves, this feature is expected to be observed in a larger segment of the population[59].

[59] The double mortality burden among adults in Addis Ababa, Ethiopia 2006-2009. CDC Preventing Chronic Disease: Vol 9, 2012:11_0142

Figure 39: cause of death in a sample of deceased adults in Addis Ababa, a verbal autopsy study

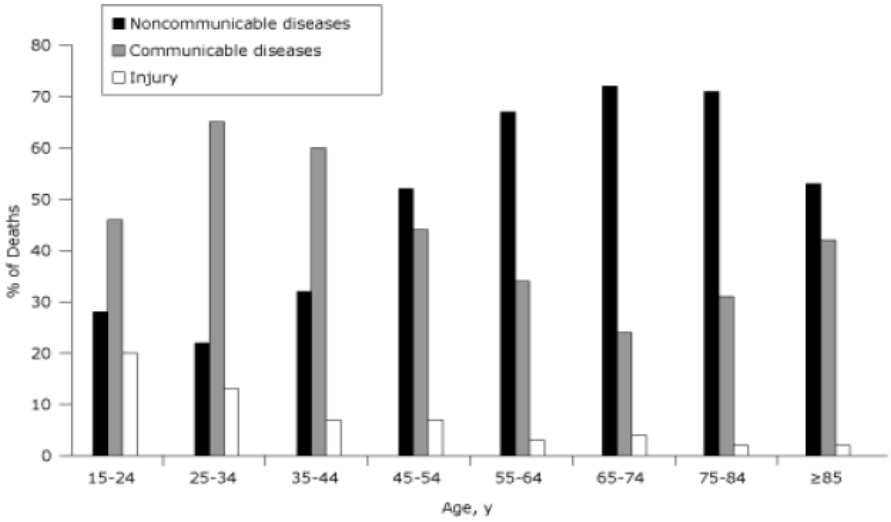
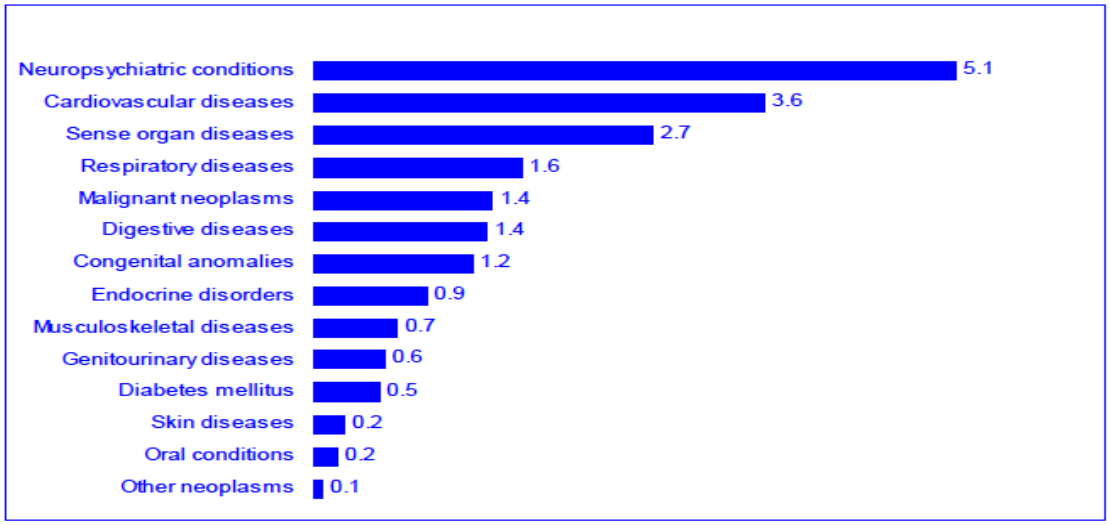


Figure. Causes of death in a sample of deceased adults (N = 3,455) in Addis Ababa, by age, 2006-2009. Causes of death may not total 100% because multiple causes could be recorded for 1 death.

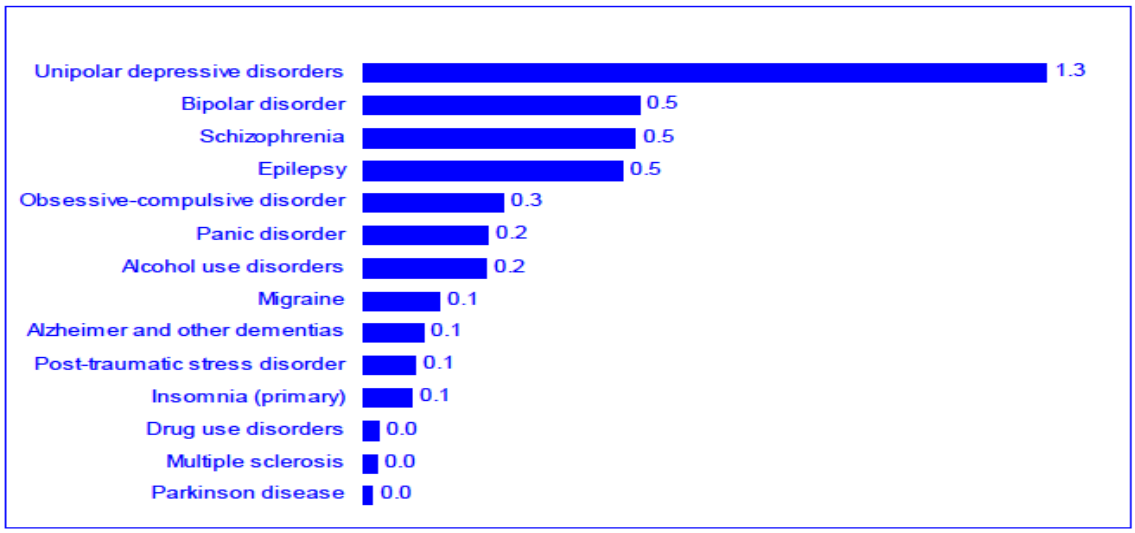
Below is the distribution of causes of non-communicable disease burden in Ethiopia as of 2004, with most conditions likely to increase as Ethiopia develops. Mental illness is already contributing to a large number of DALYs, and expanding treatment for mental illness will be necessary as Ethiopia develops.

Figure 40: Distribution of causes of non-communicable burden of diseases (as % of total DALYs[60] lost) in Ethiopia, 2004 (graph from WHO, 2010b)



[60] The **disability-adjusted life year (DALY)** is a measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.

Figure 41: Distribution of causes of neuropsychiatric burden of diseases (% of total DALYs) in Ethiopia, 2004 (graph from WHO, 2010b)



6. Indicative program direction and target setting

6.1 Input from Programs' technical working groups

Programmatic input was sought to inform the visioning exercise. Technical working groups of programs such as Malaria, HIV, TB, maternal, Reproductive Health, NTD, WaSH, Nutrition and Eye health programs discussed on strategic recommendations of the visioning exercises from programs prospective. (Appendix E: detail of programmatic input)

Table 6: summary of Programs' Technical Working groups input (this section will be amended after programmatic strategies are finalized for HSTP)

Program	Achievement by 2035	Type of Program				
		2030-2035	2025-2030	2020-2025	2015-2020	Current
Malaria	Eliminate malaria by 2035	Elimination	Pre-elimination	Pre-elimination	Pre-elimination in some districts	Control program
Tuberculosis	TB Incidence rate of less than 10 cases/100,000 populations by 2035. TB deaths will be reduced by 95% compared with 2015 Level.	END TUBERCULOSIS STRATEGY 2016 - 2035				Control program
HIV	Zero incidence of new HIV infection by 2035	HIV Prevention Program				HIV Prevention and Control Program
	No stigma and discrimination related to HIV by 2025 and beyond	HIV/AIDS treatment, care and support Program				

Maternal & Reproductive Health	Reduce Maternal mortality to 42/100,000 by 2035	Sustaining gains& consolidating safe motherhood initiative	Accelerated reduction of maternal mortality and morbidity		
	Total Fertility rate < 2.5	?FP program with dominance of permanent & long acting methods			
	No victim of Obstetric fistula and uterine prolapse cases	Eliminate obstetric fistula and uterovaginal prolapse			
	Address reproductive health needs of adolescents	functioning Adolescent & Youth friendly health services in all facilities			
	Reduce prevalence of reproductive organ cancer	Screening, early detection & treatment of reproductive organ cancer			
Child Health	Under 5 mortality < 20 per 1000 live births	A promise renewed for child survival strategy			Child survival strategy
NTDs	Elimination of onchocerciasis, Lymphatic flariasis, blinding trachoma, schistosomiasis and soil transmitted helmenthiasis by 2020	Post elimination Surveillance & maintain the prevalence below public health importance level		Elimination programs	
	Elimination of podoconiosis by 2030 (No new podoconiosis cases; *<1% Podoconiosis prevalence in endemic districts)		Podoconiosis Elimination Program		
	Eradication of Dracunculiasis (Guinea worm) by 2020 (zero incidence)	Post elimination Surveillance & maintain the prevalence below public health importance level		Guinea worm eradication program	
	Control of Leishmaniasis (VL deaths will be less than 2.5% by 2035)	Leishmaniasis Control Strategy			
NCD	* By 2025 a 10% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	NCD prevention and control program			
Environmental Health	Improved environmental health, safety and hygiene	Water quality assurance and surveillance			
		Waste management			
		Occupational health and safety management			
		pollution control and climate change mitigation			
		Food hygiene monitoring and safety assurance			
		Housing, institutional health and port sanitation			
		Personal hygiene with emphasis to hand washing and oral health			
		Sanitation and hygiene intervention during emergencies			

Eye Health	*TF <5% (children 1 - 9 years); TT 1 case per 1000 pop. By 2025 * Blindness due to avoidable cataract reduced by 80% by 2025			Eliminating avoidable blindness due to trachoma and cataract
	* reduce Measles cases <1/1000, and * absence of Bitot spot due to VAD beyond 2025			Eliminating avoidable childhood blindness
	Improve % of patients diagnosed early and receiving treatment for glaucoma, diabetes retinopathy and AMD (DR Blindness is reduced by 50% from current problem. 2. AMD blindness is recognized and addressed)	Control of avoidable blindness due to Glaucoma, diabetic retinopathy and Age related macular degeneration		
	80% of children in school has access for Spectacle service and improved access to optometrists by 2035	Refractive Error Service at PHC level		

6.2 Indicative targets based on the Bench marking Exercise

Purpose: the main purpose of the benchmarking exercise is:

- To learn health status of LMIC and UMIC
  - To understand the current health status of Ethiopia VS MIC
- To understand the health system resources of MIC
  - To understand the current health system resources of Ethiopia VS MIC
- To understand the health care system performances of MIC
  - To understand the current health care system performances of Ethiopia VS MIC

Methods used:

- Document review
- Obtain list of MIC by their classification of GNI per capita (World bank)
  - 48 LMIC
  - 55 UMIC
- Obtain their GDP by years from 1960-2011(World Bank and IMF estimates)
- Obtain their health profile from WHO's World Health Statistics report (WHO)
- Identify MIC with best health profile, population of 10 million^{+} and were LIC in 1970's
  - MMR
  - UMR
  - Age-standardized mortality rates by cause per 100 000 population for CD, NCD, Injuries)
  - Cause-specific mortality rate per 100 000 population for malaria, TB and HIV
  - Life Expectancy at birth
- The average of health status and health care performance achievements of best countries selected by the above criteria are considered as a bench mark target for Ethiopia as a best case scenario (Average

achievements of best LMIC for Ethiopia's 2025 target as a best case scenario and average of achievements of best UMIC for Ethiopia's 2035 targets as a best case scenario).

- The average of health status and health care performance achievements of all LMIC and UMIC countries are considered as a bench mark target for Ethiopia as a base case scenario (Average achievements of all LMIC for Ethiopia's 2025 target as a base case scenario and average achievements of all UMIC for Ethiopia's 2035 targets as a base case scenario).

Limitation of the Bench marking exercise

- The benchmarking is based on global estimates of world health statistics report which relay on robustness of the estimation model
- The exercise does not show how the health systems of those benchmarked countries evolved to register a relatively good health results at national level. It is suggested to explore the detail of the health system of benchmarked countries further to learn from their success and challenges in evolving the health system as the economy progress from low to middle income countries.

Indicative Bench marking indicators and possible targets for Ethiopia in 2025 and 2035

A) Benchmarking of high impact indicators

Table 7: Bench marking of high impact indicators for 2025

LMIC	**MMR**	**NMR**	**IMR**	**U5MR**	**Age-standardized mortality rates by cause per 100 000 population**			**Cause-specific mortality rate per 100 000 population**			**LE**
					CD	NCD	Injuries	Malaria	TB	HIV	
Bolovia	200	19	33	41	226	635	100	0	21	13	68
Egypt,	45	12	18	21	74	782	33		0.5	0.9	71
Guatemala	140	15	27	32	213	409	111	0	2.1	23	72
Indonesia	190	15	26	31	162	680	49	3.8	27	11	71
India	190	31	44	56	253	682	116	2.3	22	11	66
Morocco	120	18	27	31	104	708	47		9.2	3.7	71
Philippines	120	14	24	30	227	720	54	0	24	0.9	69
Sri Lanka	29	6	8	10	75	501	89	0	1.1	0.9	75
Syrian Arab Republic	49	9	12	15	41	573	308	0	2.1		68
Median of selected LMIC **(best case scenario for Ethiopia in 2025)**	**120**	**15**	**26**	**31**	**162**	**680**	**89***	**0**	**9**	**4**	**71**

Average of all LMIC **(base case scenario for Ethiopia in 2025)**	**240**	**28**	**46**	**62**	**233**	**658**	**82**	**14**	**22**	**25**	**66**
Ethiopia	**420**	**29**	**47**	**68**	**559**	**476**	**94**	**17**	**18****	**51**	**64**

* Since Ethiopia is planning to achieve a better target, benchmark less than 80 per 100,000 populations has been taken (consistent with average of all UMICs).
**According to the 2014 Global TB report Cause Specific mortality rate for TB is 32; this figure was 18 in 2013 report.

Table 8: Bench marking of high impact indicators for 2035

UMIC	**MMR**	**NMR**	**IMR**	**U5MR**	**Age-standardized mortality rates by cause per 100 000 population**			**Cause-specific mortality rate per 100 000 population**			**LE**
					CD	NCD	Injuries	Malaria	TB	HIV	
Brazil	69	9	13	14	93	514	80	0.1	2.5	7.8	74
China	32	9	12	14	41	576	50	0	3.2	0	75
Colombia	83	11	15	18	58	335	69	0.2	1.6	14	79
Cuba	80	3	4	6	33	422	45	0	0.3	2.6	79
Iran, Islamic Rep.	23	11	15	18	56	569	75	0	2.9	6	74
Malaysia	29	5	7	9	117	563	63	0	5.4	18	74
Mexico	49	7	14	16	58	468	63	0	1.8	0	76
Peru	89	9	14	18	121	364	48	0.1	5.1	14	77
Thiland	26	8	11	13	123	449	73	0.3	14	31	75
Tunisia	46	10	14	16	65	509	39	0	2.9	0.9	76
Turkey	20	9	12	14	44	555	39	0	0.5	0.1	75
Median of selected UMIC **(best case scenario for Ethiopia in 2035)**	46	9	13	14	58	509	63	0	3	6	75

Average of all UMIC **(base case scenario for Ethiopia in 2035)**	57	10	16	20	125	608	81	0.6	5.7	20	74
Ethiopia	420	29	47	68	559	476	94	17	18	51	64

Figure 42: MMR

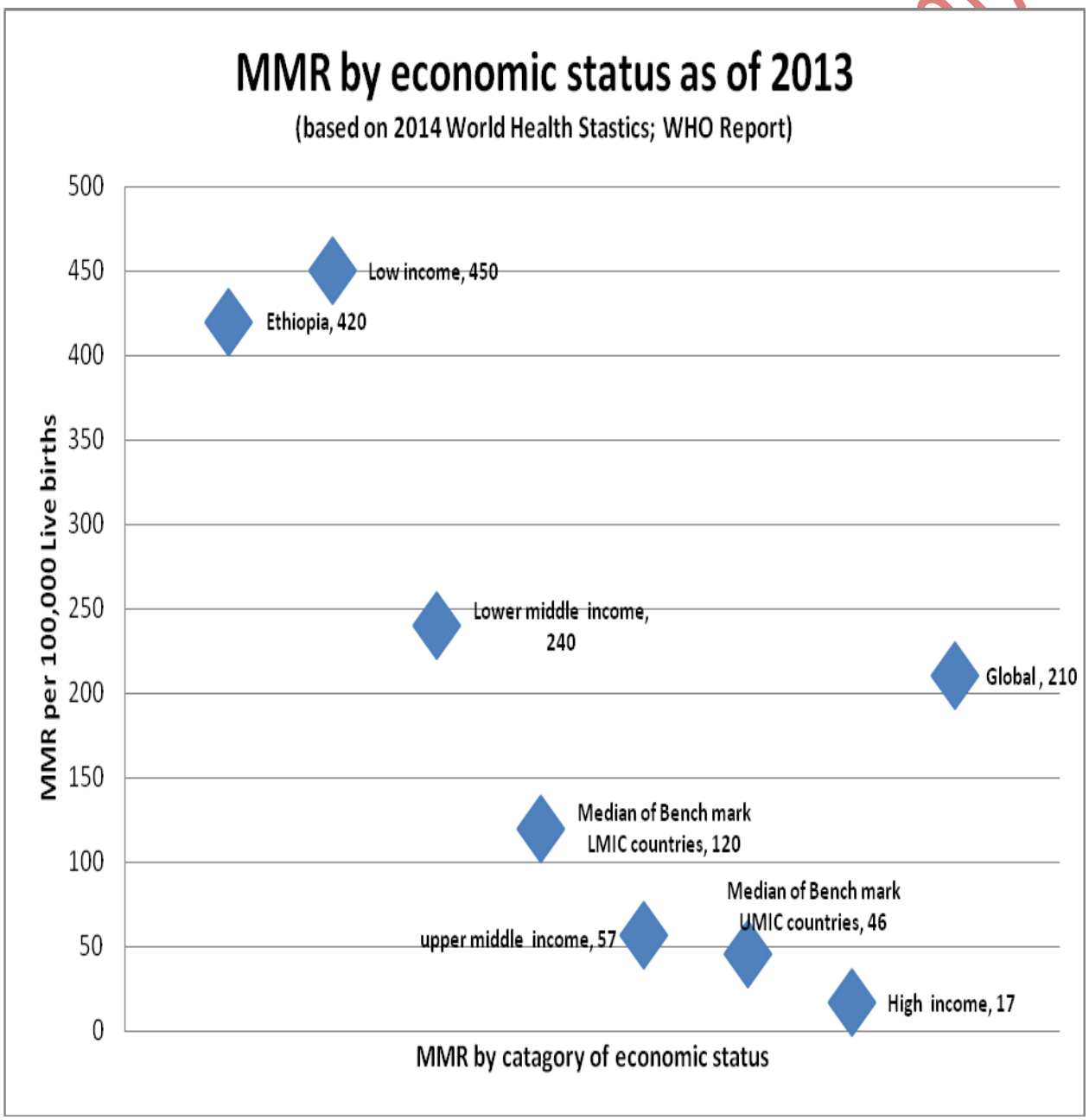


Figure 43: NMR, IMR, U5MR

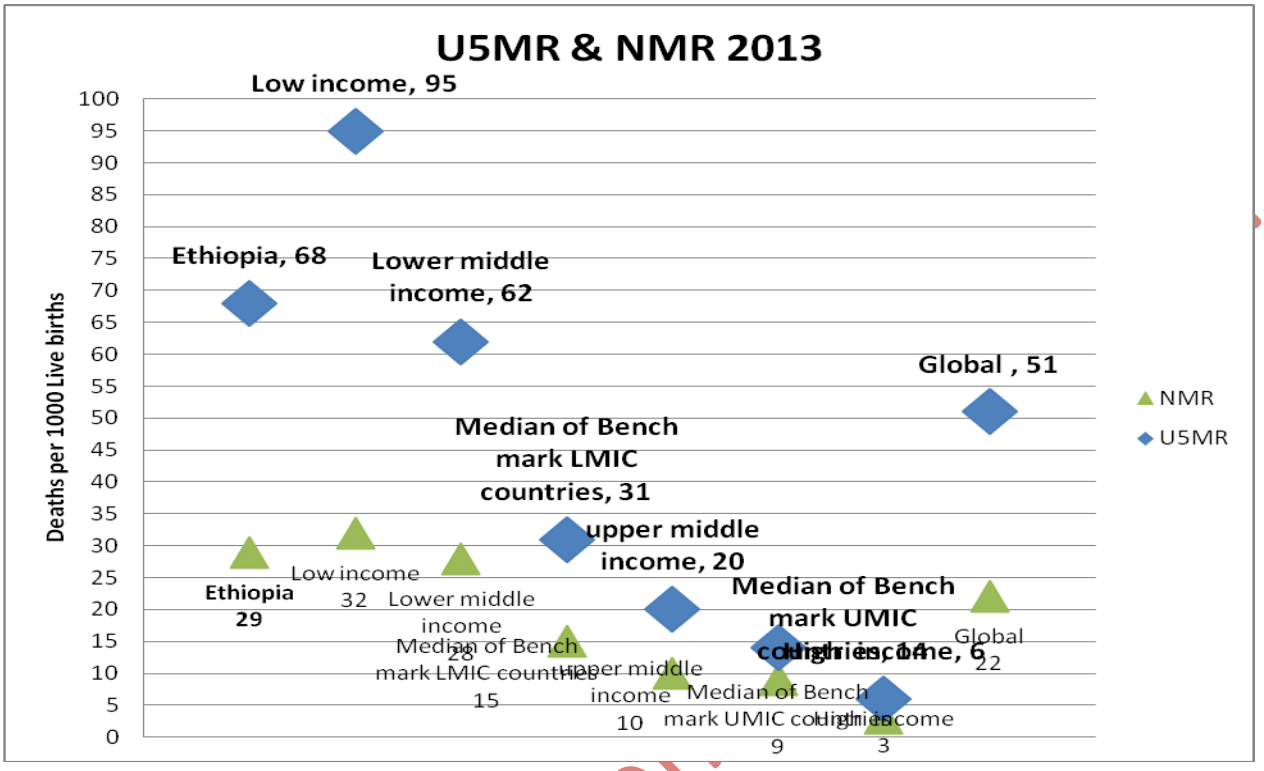


Figure 44: Age Standardize MR Communicable Diseases and Non communicable Diseases

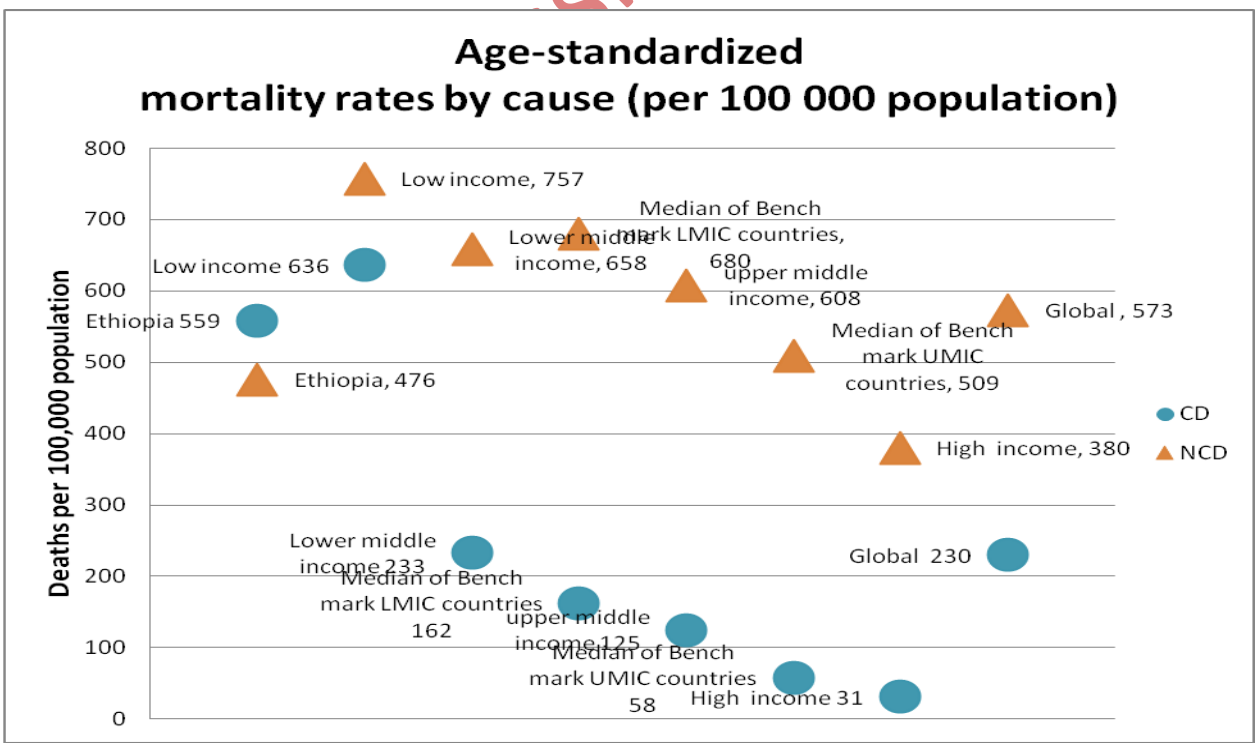
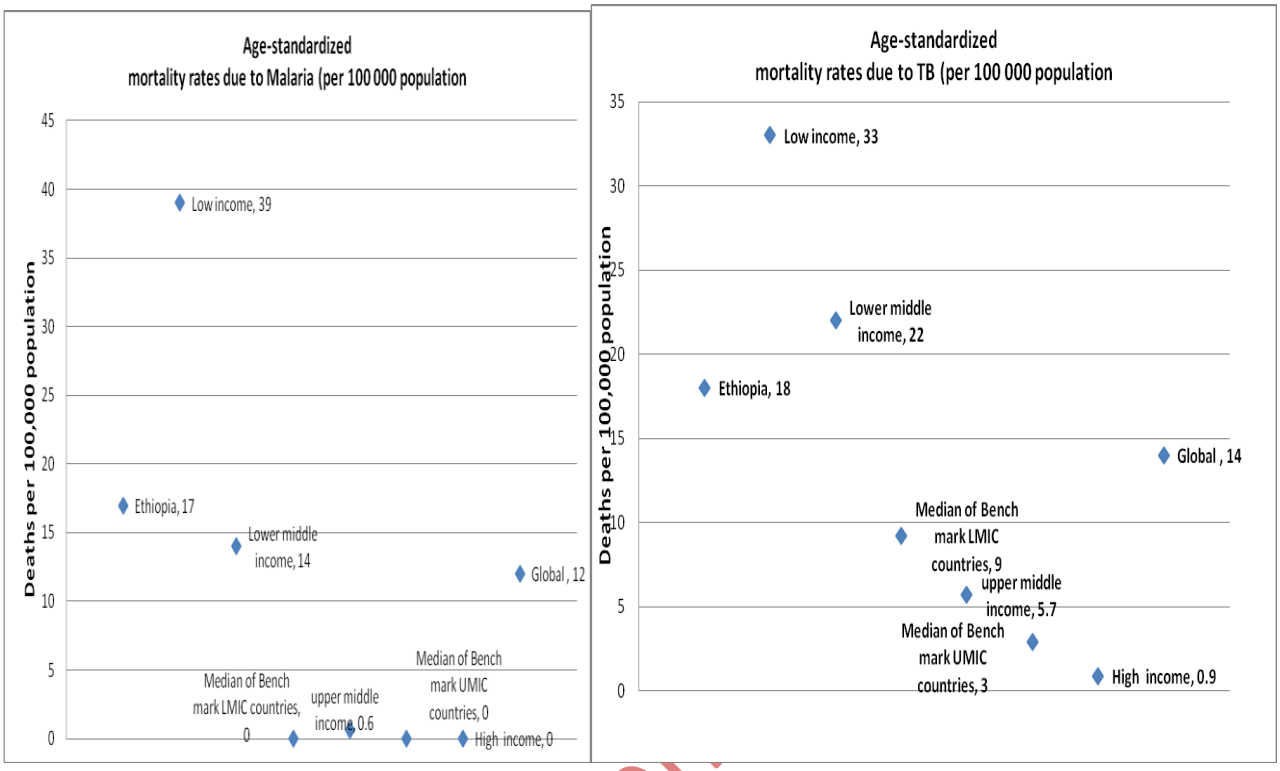


Figure 45: Cause Specific Mortality rate (Malaria, TB and HIV)



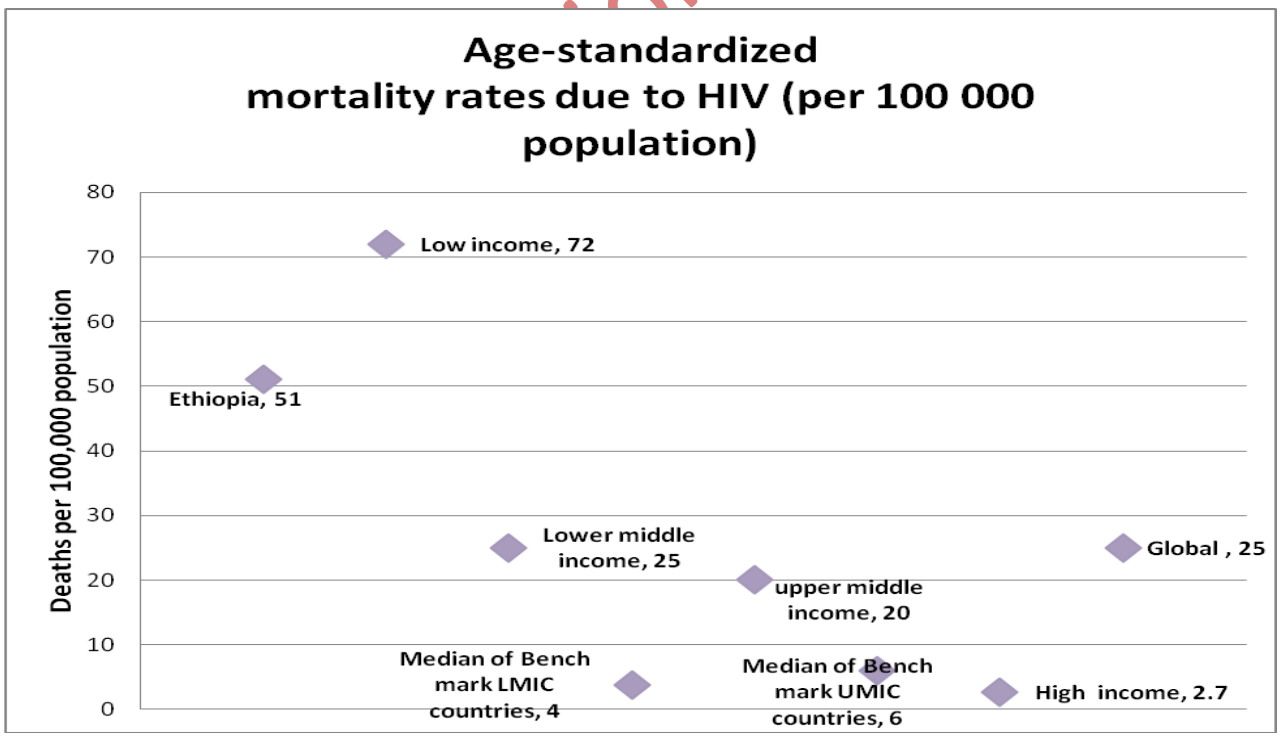
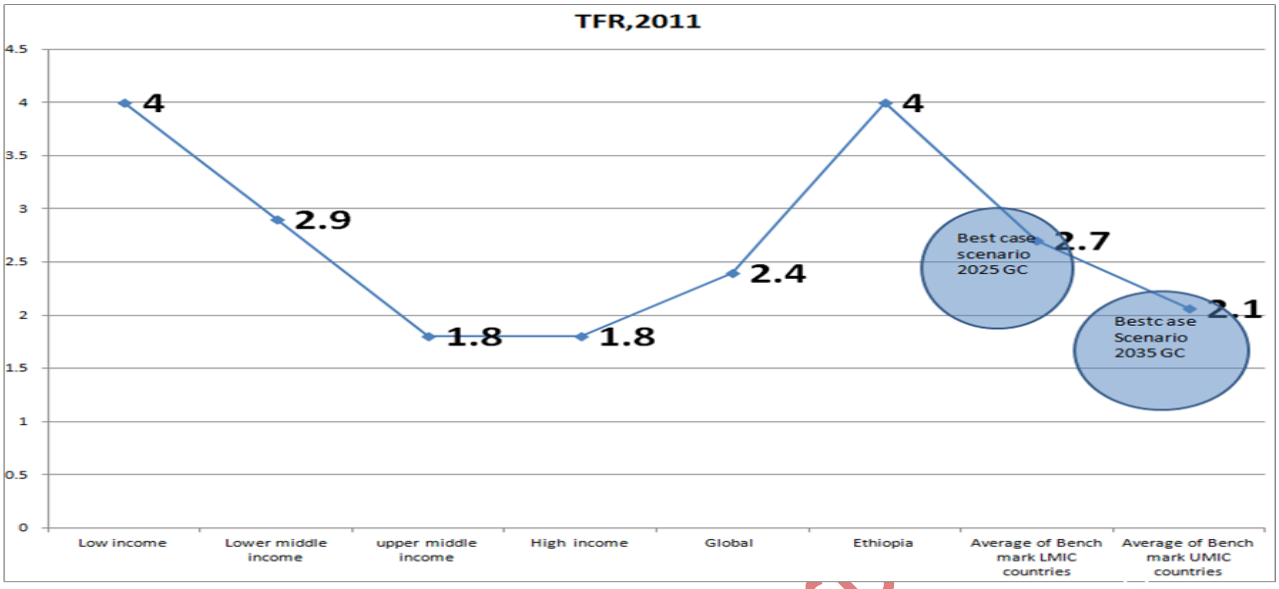
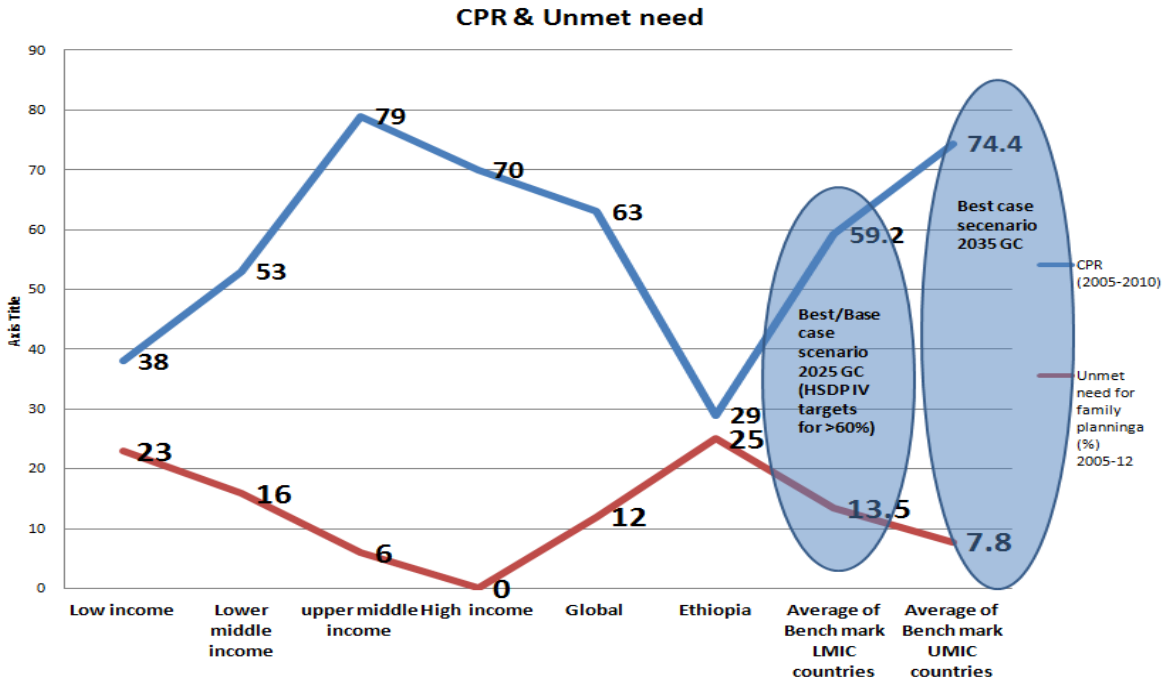


Figure 46: TFR



B) Benchmarking of Health Service Coverage [61]

Figure 47: CPR & unmet need



[61] **graphs are deliberately made line graphs to better visualize Ethiopia's position**

Figure 48: ANC 4 + SBA

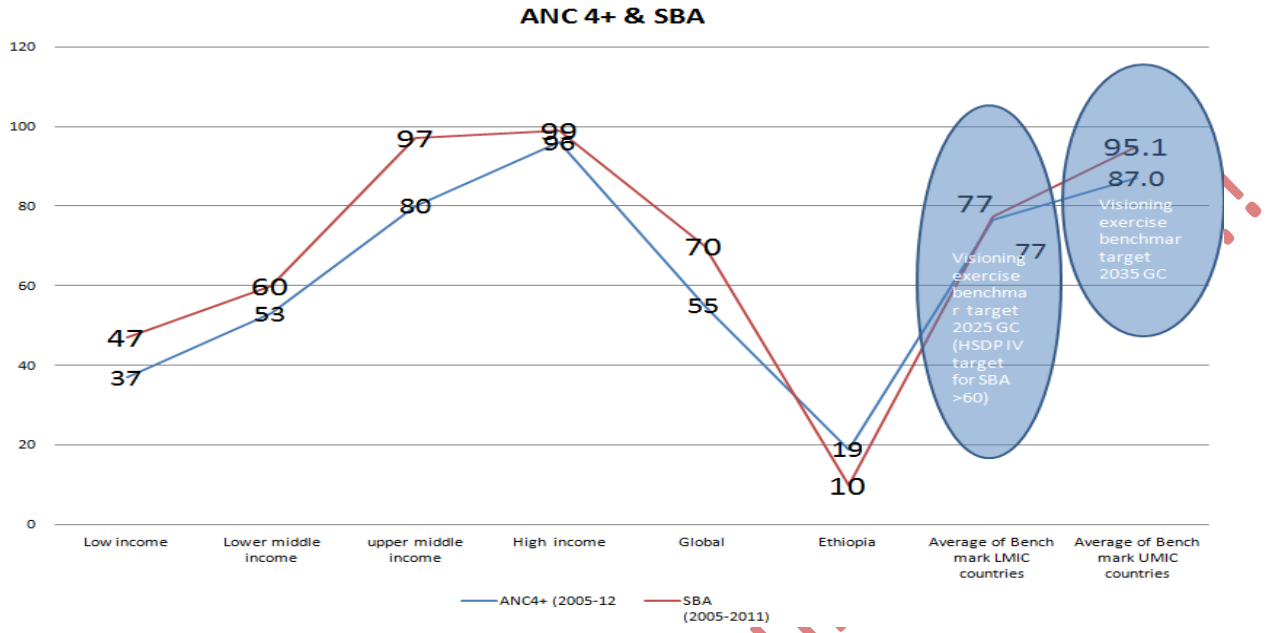
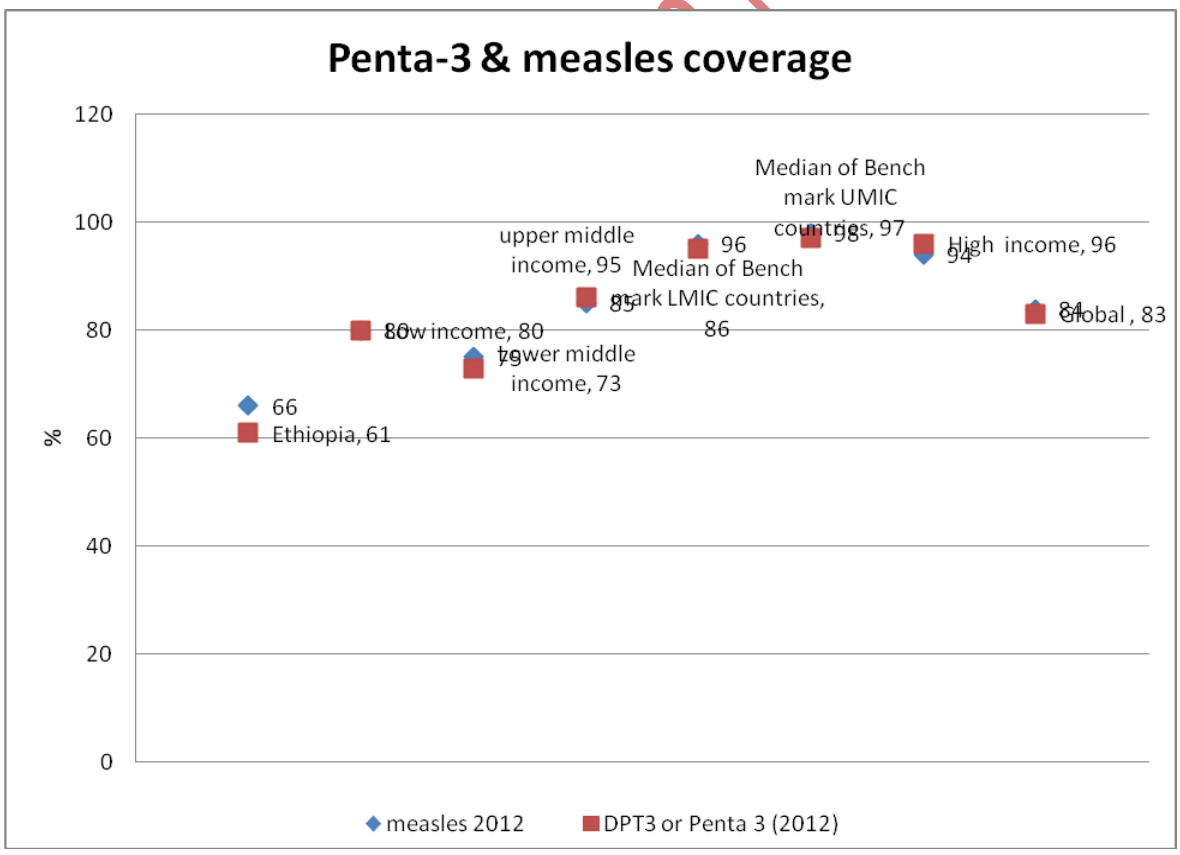
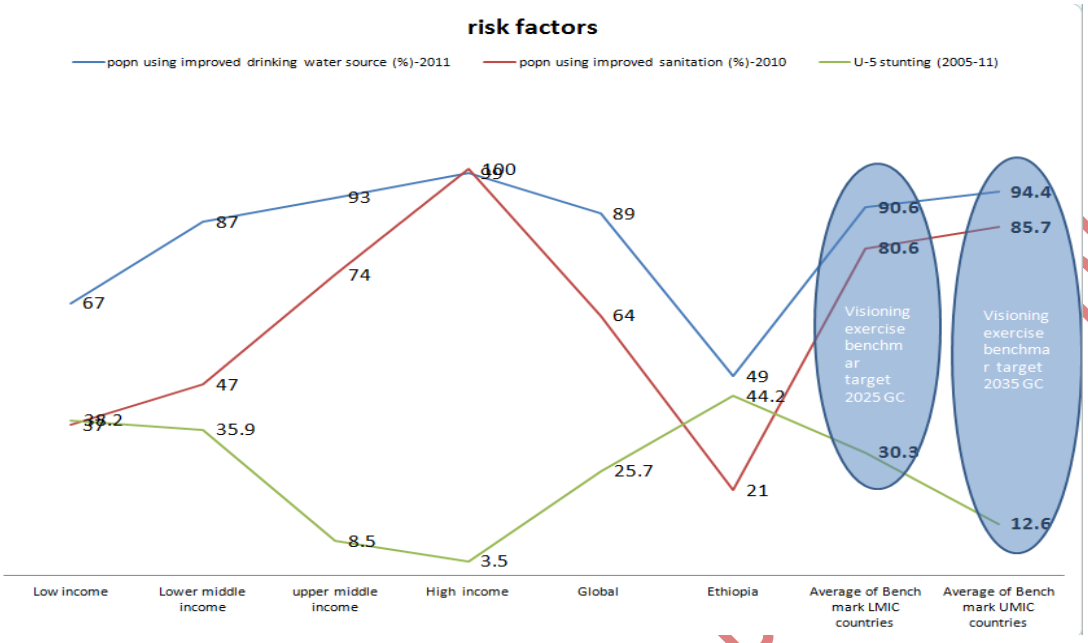


Figure 49: Immunization Coverage



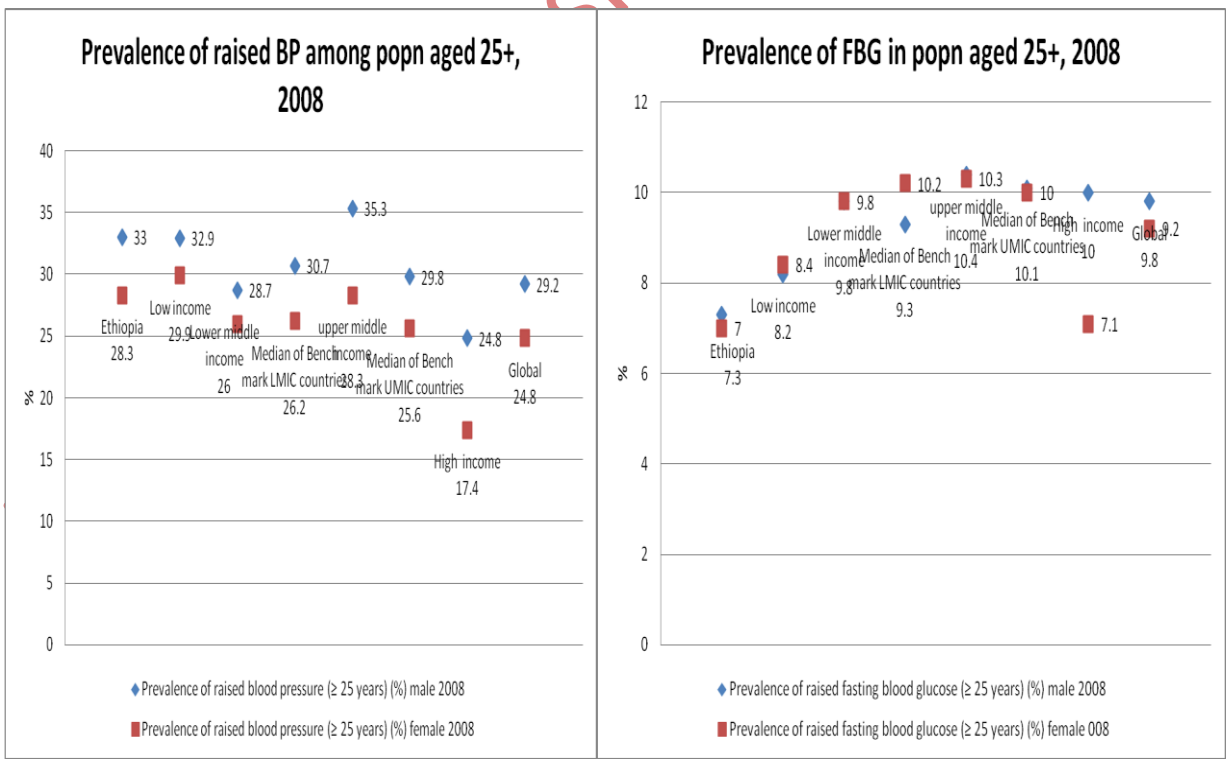
c) Benchmarking for Risk factors

Figure 50: Risk factors CD



* the National Nutrition Plan (NNP) and HSDP IV has set a target of 30% for stunting by 2015. Hence, a better target need to be set for 2025.

Figure 51: Risk factor for NCD



D) Health System resources

Figure 252: HRH

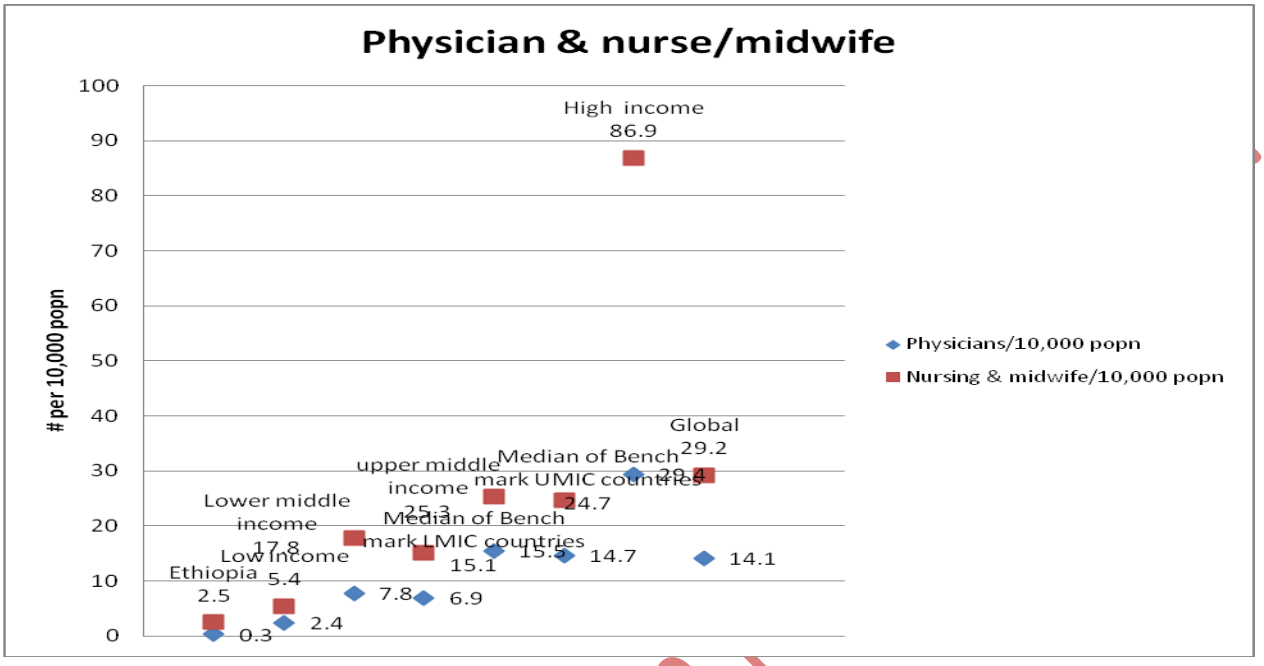


Figure 53: Per capita expenditure on health

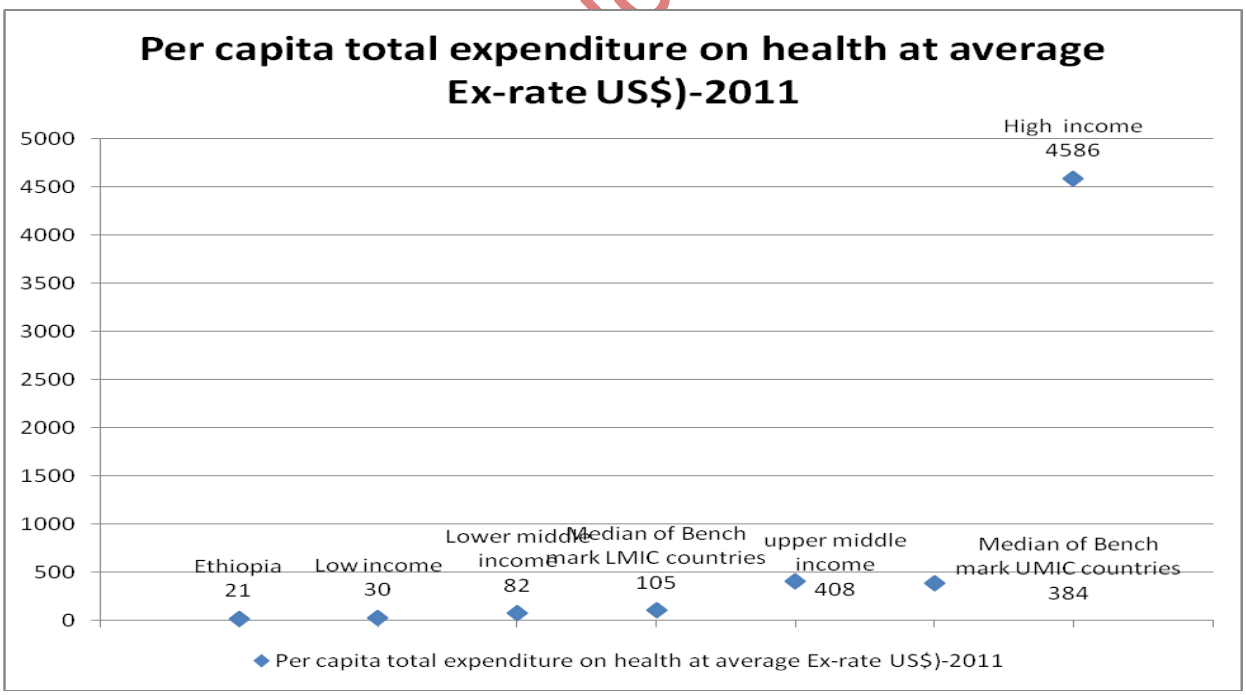
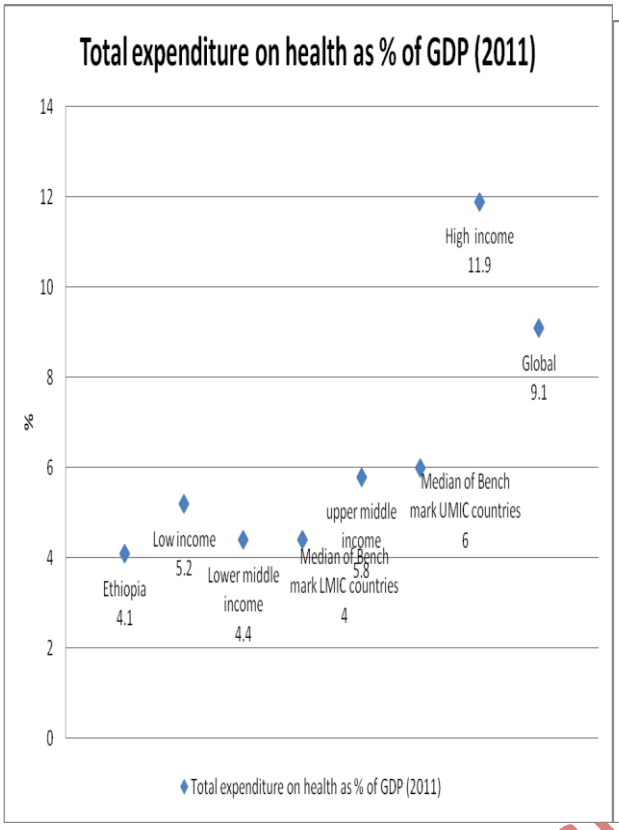


Figure 54: Health Expenditure



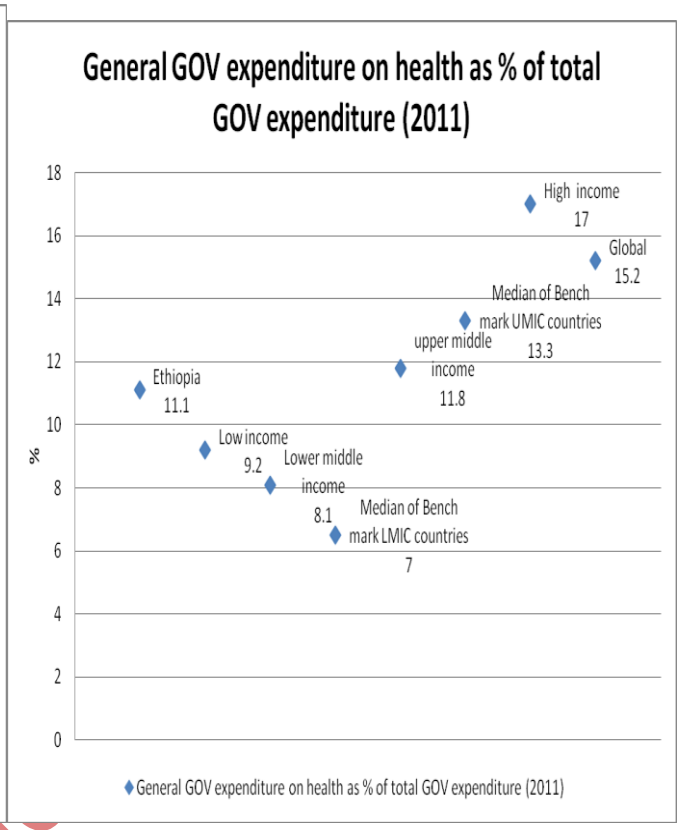
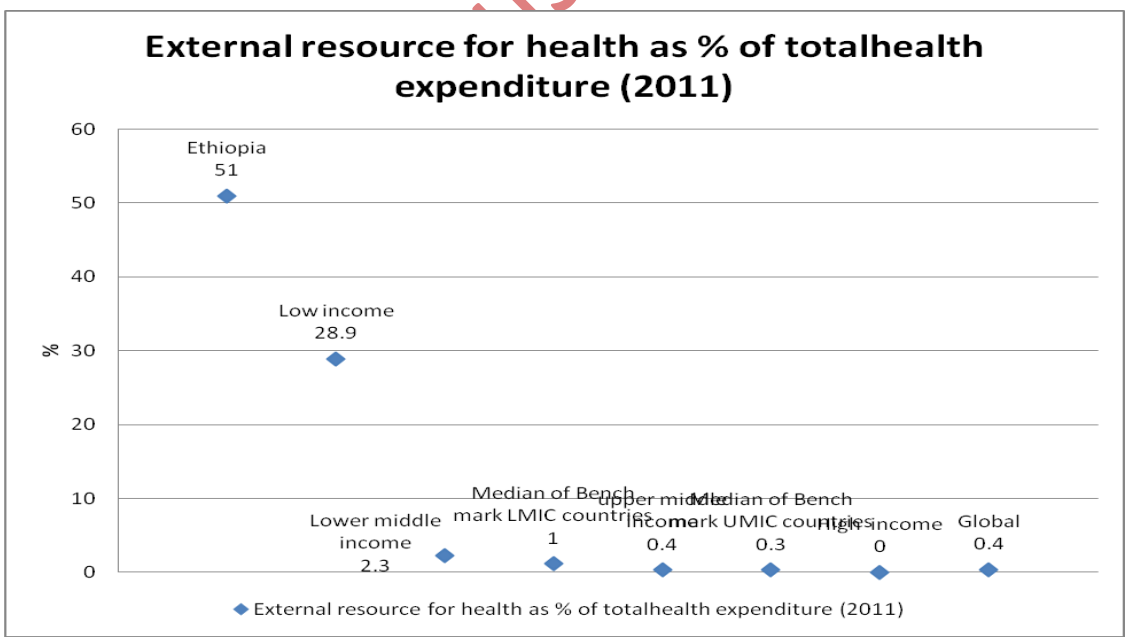


Figure 55: Health Expenditure/External resource



7. Strategic recommendations

This document proposes broad directions for the health sector focusing on Primary Health Care development as a means to achieve UHC (expand service package, ensure their universal coverage and address barriers for accessing the services). To complete that task, it was important to make explicit what the Primary Health Care system would be able to accomplish in terms of health and other results. The indicative targets stated above lays out a set of specific output and outcome objectives benchmarked against current average achievements of lower-middle, upper-middle income and high performing selected middle income countries. In some cases, HSDP IV targets exceed the current performance of LMICs or UMICs. Ethiopia's Primary Health Care system would then seek to sustain and further improve these achievements. In other cases, the distance between current achievement and targets and middle-income country averages is still large, indicating substantial challenges for improvement.

The main strategic areas for health sector particularly Primary Health Care development are summarized in the table below. Each of these areas is expanded upon further in subsequent sections.

Selection of Strategic Areas

There are many possible ways in which the PHCU[62] could be strengthened that involve increasing essential inputs, improving the organization, management, and governance structure, and many others. Below are some of the strategies the Visioning Committee has identified for further development, although other options may be developed over time.

The document promotes public health approach which give due emphasis for public provision and public financing of PHC as well as emphasizing on building a system on people centered rather than diseases driven approach as clients appear with multiple morbidity. Emphasis is given to components of the health system that ensure better access to quality health services including:

- Health service delivery through PHC as a gate keeper of the tier system
- Leadership and governance in the community empowerment, strengthening the human resource development and capacity building strategic areas
- Use of Health information and technology

[62] For the purpose of this document PHU includes a primary hospital, 3 health centers, and the health posts overseen by the health centers. The PHU has a catchment area of 100,000 population. A PHU is distinguished from the PHCU by the inclusion of the primary hospital.

Table 9: Summary of strategic areas

1. Empower the community to play a significant role in the health sector 1.1. Engage community members and build community ownership of health systems 1.2. Ensure healthcare organizational governing boards have community representation 1.3. Ensure health is properly addressed by activities and policies involving multiple sectors 1.4. Increase household production of health and support improved health behaviors through community engagement strategies which are well informed with evidences generated locally and beyond. 1.5. Ensure community engagement with new financing approaches, especially community-based health insurance (CBHI)
2. Strengthen Health Service Delivery with emphasis to primary health units (PHCU) within the wider health sector context 2.1. Establish standardized care packages delivered at PHCU, secondary, and tertiary levels, and update over time as needed with a clear referral and consultation network 2.2. Expand and sustain numbers of functioning health care facilities (PHCUs, secondary hospitals, and tertiary hospitals) in the country including provision and maintenance of medical equipments 2.3. Establish effective management structures in PHCUs and its governance systems at all levels of the health system 2.4. Establish a team-based approach to Primary Health Care with appropriate skill mix for health promotion, diseases prevention and curative services 2.5. Set a clear career path to health work force working in the PHCUs including the HEWs 2.6. Ensure the health delivery system is supported by a well-functioning supply chain, health management information system (HMIS), quality assurance system and innovative health and information technologies 2.7. Ensure the PHCU is capacitated to handle public health emergencies
3. Ensure a robust Human Resources Development system that commensurate with socio economic development of the country as LMIC by 2025 and middle-middle IC by 2035 3.1. Strengthen mechanisms to develop and retain high quality health care professionals including health care leaders (licensure, accreditation, and board certification), as flooding strategy continues 3.2. Support growth along defined career paths in clinical care and public health including clear path of the HEWs 3.3. Strengthen the Human Resources Information System (HRIS) for accurate planning, implementation and monitoring.
4. Enhance the role of non state actors in improving health status 4.1. Build capacity to develop and manage public-private contracts and partnerships with private providers to strengthen Health Care access and quality of services that complement government programs and to help fill gaps in services provided by the government (e.g., clinical and diagnostic services, tertiary care, medical tourism), 4.2. Strengthen FMOH and other departments' capacity to regulate private sector actors

4.3. Encourage private sector to take advantage of an enabling policy environment to invest in health sector 4.4. Increase engagement of civil society organizations in the health sector 4.5. Due attention to traditional medicine
5. Develop sustainable financing mechanisms necessary to achieve a better health outcome 5.1. Mobilize local resources for health that commensurate with per capita spending in lower-middle income countries by 2025 and by upper-middle income countries by 2035 including crafting innovative financial scheme 5.2. Ensure mutual accountability in utilization of funds from development partners 5.3. Develop a robust monitoring tool covering both external and internal funds to track health care expenditure including those for Primary Health Care services 5.4. Expand pooling and purchasing mechanisms to accelerate progress towards universal coverage using community-based health insurance (CBHI) and social health insurance (SHI) mechanisms 5.5. Integrate efficiency gains into the comprehensive health financing strategy
6. Develop institutional capacity in the health sector to be responsive to changing economic, social, environmental, technical, and epidemiologic context 6.1 Ensure organizational arrangements and leadership within the FMOH , Regional Health Bureaus and District Health offices can effectively support the efforts of achieving UHC through Primary Health Care vision and strategies. 6.2 Develop capacity to produce and use evidences generated locally and globally for setting strategic directions and policy making 6.3 Ensure capacity of agencies of FMOH (EPHI, FMHACA, PFSA, EHIA and relevant others) to be able to provide the required support for health service delivery including health service regulation, logistics, research and administration of health insurance 6.4 Improve capacity of MOH at all level to proactively engage in multi-sectoral activities 6.5 Encourage involvement of the local universities in improving the capacity the health sector with main focus on PHC 6.6 Use of scientific advisory committee to inform health policy and strategic directions

Several themes cut across several strategic areas. These themes are listed below and linked to the sections most relevant to the themes.

Table 10: Cross-cutting themes and links to specific strategies (the issues below will be narrated in a separate section)

Cross cutting issues	Content
Leadership and Good Governance	All strategic recommendations
Gender	Community empowerment Strengthening PHC HRD HCF Capacity building in the health sector

Regulation	Defining care packages for each level HRH licensure, certification, accreditation FMOH and other departments' capacity to regulate private sector Monitoring of fund flows FMOH capacity to support the strategy Mechanism to assess health technologies for potential adoption
Technology	HMIS and innovation medical and information technologies HRIS strengthening Integrate efficiency gains Mechanism to assess health technologies for potential adoption
Multi-sectoral collaboration	Health need to be addressed by policies, strategies and activities of all sectors to promote health, prevent diseases and injuries, mitigate or eliminate health risks as well as enhance well being of the population. For instance, MOE-FMOH collaboration on education of health care workers and Early Childhood Development and care (ECDC); MOF-FMOH collaboration on mobilizing domestic resources MOH-MOA+---nutrition sensitive agricultural development FMOH-MoI on industrialization and health Enhance FMOH and other Ministries capacity to place health in the center of development agenda
Research	Basic and operation researches need to be performed to have evidence based decision making at all level

Detailed Strategic Recommendations

STRATEGIC AREA #1: Empower the community to play a significant role in the health system

The current organized community or popular mobilization should continue, evolve and be tailored according to the need of the majority. The key question in empowering the community in a sustainable and effective manner is "how can we keep the community in health?". Sub-strategies focus on meaningful participation of community members, building community ownership of health systems, building community representation in health facility governance boards, ensuring health is supported by other sectors and vise versa, increasing household production of health, and ensuring community participation in new health financing approaches. Ultimately, the community should be empowered to produce its own health and play its vital roles in the health sector with the spirit of ownership.

Empower the community through active participation of its members to ensure community ownership of health systems

Many opportunities exist to engage community members and build community ownership of health systems. The current flagship community based program of Ethiopia is the health extension

program. The program has shown a significant improvement in the health of the rural community. Recently, the GoE has introduced a broad-based community mobilization platform to further strengthen the HEP called the Health Development Army (HDA). The HDAs are currently working with the HEWs to implement the health extension packages. The HDAs are engaged in other developmental and social sectors including agriculture and education, which creates a community-based platform for inter-sectoral collaboration.

Keeping the community interested and engaged in such organized mobilization will be a challenge as the country moves forward and the needs of the community change. Hence, future strategies should build upon the principle of organized community movement which can later be linked with economic and social benefits. Such concerted efforts need to be geared towards transforming each district in social and economic parameters so that the disparities which may be created due to economic growth will be minimized.

The HDA model is flexibility to adapt to local conditions and future changes in health needs and demands. Such organized groups need to be transformed to economic groups through engaging in income generating activities facilitated by relevant sectors. Besides, the HDA leaders and member of model households could be trained further in a demonstration project to be certified with level I and level II competencies as community health workers with a potential to replace the HEWs by being promoted to Level III. If the demonstration works, scaling up of the certification of HDAs to be community health workers needs to be carefully crafted with relevant stakeholders. Such systematic upgrading of community health workforce may alleviate challenges related to turn over of HEWs in the future as well as fill gaps as the HEWs upgraded to take care of predominantly clinical care. The leadership of the health sector at all level need to actively envision, create awareness, assists on organized movement for a better community with the full participation of the community in a sustainable manner.

The service delivery points need to have a forum to get feedback from the community. Some hospitals in Ethiopia are beginning to hold monthly "town hall" meetings during which representatives from each hospital department listen to feedback from the community and share the results of their quality improvement efforts to date. These meetings have been well received and should be expanded to the Primary Health Care level.

Ensure healthcare organizational governing boards have community representation

As governing boards are developed for the (PHCU), which will include a primary hospital and three to five health centers (caring for an average of 100,000 population according to the current trend), ensuring that community members are represented and trained to participate meaningfully on the governing boards is important. The creation of the PHCU governing boards should incorporate lessons learned and models developed for hospital governing boards initiated in 2008.
Establishing effective governing boards will require a multi-year commitment to training and support of members. A guiding toolkit needs to be developed to ensure the community has real representation on the governing boards and periodically elects the right representative. They will

also need continuous training on how representatives engage their constituencies to ensure their interests are reflected in the decisions of the management.

Ensure health is properly addressed by activities and policies involving multiple sectors at the community level

Inter-sectoral engagement in health improvement involves a number of actors including the Ministry of Health, Ministry of Education, Ministry of Transport and Communication, Ministry of Water and Energy, Ministry of Agriculture, Ministry of Commerce, Ministry of social affairs, Ministry of Finance and others. Many services overseen by these ministries include those focused on housing, sanitation and waste removal, water safety, electricity, roads, occupational health hazards, industrial safety, agriculture, outbreaks response, school health, and nutrition; all of which have extensive influence on health. Therefore, agencies that oversee these programs should coordinate with federal, regional, zonal, and local health officials to capture synergies on positive influences towards health and mitigate negative influences in their strategies, operational plans and implementation. Political engagement beyond the health sector will be essential for ensuring real and sustained improvements in health outcomes. While building inter-sectoral relationships at the federal level, local integration across sectors will be critical. At the local level, the *kebele* (village) council is a potential leverage point for engaging communities as well as non-health sector representatives in promoting health and building community ownership. Comprised of a *kebele* administrator, HEWs, a women's association representative, an agriculture extension worker, and a community/religious leader, the *kebele* council is an ideal forum in which to develop health education and health promotion ideas and oversee their execution. Additionally, as the *kebele* council head is also the head of the command post at the *kebele* level, the council should take an active role in supporting the Health Development Army in the community.

At the national level, close coordination and cross-sectoral planning should continue, with the goal of ensuring that health remains a central part of Ethiopia's development strategy and that all sectors are engaged in ensuring the health of the country. This coordination, currently in the form of regular cabinet meetings and joint development of major strategic planning documents could be expanded to make cross-ministry connections, such as working groups, at the department level more effective.

Demographic dividend and multi-sectoral collaboration

Ethiopia is at a crossroads: forward-looking government policies and programs can lead the country in a more favorable direction. If lower mortality is balanced by lower fertility, Ethiopia has a window of opportunity to capture the economic boost that a demographic bonus can provide.

When there are more working-age adults relative to children under age 15 and the elderly, those in the working ages (generally ages 15 to 59) have a lower "dependency burden"—fewer people to support with the same income and assets. Under the right conditions, this can lead to a short-term but substantial economic bonus. This "demographic bonus" is a window of opportunity to increase economic output because of the larger workforce; save money on health care and other social

services; improve the quality of education; invest more in technology and skills to strengthen the economy; and create the wealth needed to cope with the future aging of the population. The window eventually closes as the workforce ages and relatively fewer workers are supporting increasing numbers of older people.

In order for this larger working-age population to contribute to economic growth, they must have job skills, be productively employed, and save and invest their incomes wisely. As much as one-third of the rapid economic growth among the East Asian "tigers" can be explained by the growth in the labor force as fertility declined and by the increase in savings and accumulation that accompanied this growth. Drawing from the East Asian experience, reaping the demographic bonus also depends on:

- Strong public health systems that improve child survival and health in general.
- Widespread availability and acceptability of family planning.
- Rapid and steady declines in childbearing.
- Improvements in educational enrollments and quality.
- Stable economic conditions conducive to growth and job creation.

A demographic dividend will not be realized without prior investment in multi-sectoral manner through community participation: An uneducated and unskilled youth population can threaten rather than enhance national stability and economic security. Hence, a sound Multi-sectoral collaboration and health-in-all-policies approach predominantly at community level helps to ripe the fruits of demographic dividend.

Increase household production of health and support improved health behaviors

Identifying key health behaviors for public education and campaigning during each health sector strategic development process is important. The focus of health promotion and disease prevention behavioral interventions may vary from decade to decade as the country progresses towards middle-income country (MIC) status. The focus on improving the behavior of the community on sanitation, personal hygiene, good housing condition, water and food safety, indoor air pollution, use of insecticide treated nets (ITNs), positive sexual and reproductive health behaviors, caring for children and mothers and improving health seeking behaviors needs to continue with due emphasis alongside promoting positive behaviors to prevent non-communicable diseases.

As the country develops and urbanization increases, the prevalence of non-communicable diseases (NCDs) will increase. The health sector should be ready to address issues of nutrition, exercise, smoking and alcohol use, drug use, mental health issues, environmental pollution, as well as chronic care management for people with prevalent chronic diseases such as cardiovascular disease, cancer, diabetes, and pulmonary disease. Engaging households in chronic disease prevention and management will be paramount. Thus, the HEPs ability to develop household capacity to identify and manage increasingly common chronic illnesses will need to be strengthened.

Developing effective **school-based programs** will encourage positive youth health and household health behaviors. One such program is the 2008 Ethiopian Ministry of Education (MOE) School Health and Nutrition (SHN) strategy to promote health and nutrition related school policies, safe and sanitary school environments, skills based health and nutrition education, and school based health and nutrition services. The document *A Strategy for the Development of School Health and Nutrition in Ethiopia* offers clear guidance on the steps needed to implement SHN and other school-based health promotion activities, although it needs to be finalized and endorsed (Drafted in 2013). Furthermore, the existing Education Management Information System, which is being used to collect data on HIV prevention indicators in schools, can also be utilized to capture information on student's health status and school's implementation of SHN activities. Similarly, efforts such as the 1 to 5 network in which influential community members and opinion leaders are encouraged to advocate for health within their communities could be encouraged.

Workplace programs to improve employees' and their families' health should be considered. These may include fitness campaigns, worker's health and safety regulations and programs, workplace screening programs, and health education initiatives to encourage stress-reduction, physical exercise, and proper nutrition, along with other initiatives.

Ensure community engagement with new financing approaches, especially community-based health insurance (CBHI)

Providing health insurance options for communities can remove financial barriers to community utilization of health services by reducing catastrophic out-of-pocket costs in seeking health care Studies of community based health insurance (CBHI) and social health insurance (SHI) demonstrate increased utilization and reduced out of pocket costs associated with implementation of the insurance schemes. Furthermore, research (Wang et al., 2012) suggests that people in the poorest income quintiles benefit more if both inpatient and outpatient services are covered. A broader and deeper benefit package is desirable for achieving equity objectives, but its effectiveness will depend on the impact of out of pocket spending on household welfare and health care use, which may be different for inpatient and outpatient services. Detailed strategies related to health insurance approaches and potential negative effects of universal health insurance (e.g., overutilization, increasing costs) are addressed in **Strategic Area #5**.

In addition to the benefits related to health service utilization and financial protection, CBHI can also be a vehicle for enhancing community participation in other health promotion and prevention activities at the community level, reinforcing community action for public health. Communities can observe that prevention can reduce health care costs they bear through pooled funding mechanisms, which builds support for public health and prevention efforts.

The community should be engaged in management of the CBHI. Hence, the Ethiopian Health Insurance Agency needs to design mechanisms of accountability and responsiveness to the needs and concerns of the community.

STRATEGIC AREA #2: Strengthen health service delivery with emphasis on primary health care units (PHCU) within the larger health sector context

Reviewing the functionality the PHC and redefining it accordingly in a wider health sector context is essential to address the need and expectation of the community. Sub-strategies focus on establishing standard care packages at all levels of care including revising Essential Health Service Packages (EHSP), expanding and sustaining numbers of functioning health facilities, establishing effective management structures in PHCUs and networking with higher health care facilities, positioning HEWs within the health care structure to play a better role and developing a team-based approach to Primary Health Care, elevating knowledge and skills of PHCU staff, establishing effective healthcare governance systems, developing a well-functioning supply chain of medicines and medical equipments, quality assurance system and other supportive structures, use of appropriate technology and enhance capacity of PHCUs to handle public health emergencies.

Establish standardized care packages delivered at PHCU, secondary, and tertiary levels, and update over time as needed including referral network system

Reviewing the functionality of the PHC and redefining it accordingly is essential to address the need of the community within the capacity of the nation. The Ethiopian Essential Health Service Package (EHSP) which was prepared in 2005 need to be revisited to ensure the packages are in line with the current and foreseen need of the community. The PHCU needs to be designed to fit within a wider referral system. There will continue to be greater emphasis on health promotion, disease prevention, basic curative, palliative and rehabilitative services at the primary health care unit (where 80-90% of patients will receive their care), and advanced curative services at the general and specialized levels of the health system. However, the health facilities at the higher level of the tier need to strengthen the PHC units of their catchment areas through training, supervision, mentoring, outreach, consultation and referral services. A clear referral and consultation network should be part of defining the PHC with accountability matrix for feedbacks in both directions so that clients will get better care in a seamless continuum of care.

The PHCU would provide first-line health promotion and prevention services, as well as basic diagnostic, curative, palliative, and rehabilitative services. Within the PHCU, the primary health centers would refer to the primary or higher level hospital for more broad diagnostic services, emergency services and complex chronic disease management. These service packages should be tailored to the urban, agrarian, and pastoral settings. The agrarian HEP is relatively performing good compared to the urban and pastoralist settings. The Urban HEP need redefining the packages and the approaches while the pastoralist HEP may require further exploration to design a tailored approach. Further work is needed by the FMOH to review other countries experiences and to assess the practical requirements to enable delivery of service packages at each facility.

Emergency Medical Services: The arrangement of personnel, facilities and equipment for the effective and coordinated delivery of EMS required in the prevention and management of incidents which occur either as a result of a medical emergency or of an accident, natural disaster or similar

situation. EMS systems refer to the broad range of emergency care from the pre-hospital first responder to the intensive care unit setting[63]. Emergency medical services (EMS) systems are an integral part of any public health care system with a primary function of delivering emergency medical care in all emergencies, including disasters or mass causalities. It is broadly recognized that an helpful disaster response is more reliant on the pre-existing local system than on external support. In the early stages of a health crisis, the ability to respond depends on the level of preparedness of the local community and health services. An competent and well-structured EMS system ensures the attainment and preservation of the skills necessary to deal with health emergencies including disasters, while disaster preparedness helps to recognize organizational gaps.

The primary health care units which are closer to the community or scene of emergencies have a great role to strengthen the Emergency Medical Services (EMS) in the country through creating awareness and training of first responders in their community based activities as well as treating patients to their capacity in acute phase of the illness and follow up of patients after attended by emergency departments of their catchment hospitals.

Primary health care need to be the principal provider of both routine and urgent health care to the Ethiopian population, providing continuity and coordination of health care for individuals to the next higher level in safest, efficient and effective manner.

While there can be overlap in those individuals who might initially present to primary health care or Emergency Departments (ED) of hospitals, Emergency Departments need to provide emergency medical care and not ongoing primary health care. As such, all attendances to Emergency Departments of hospitals should be regarded as a significant health event and all urgent health care should be provided within the framework that the patient will, as much as possible, receive their ongoing care from primary health care.

Appropriate clinical information on any ED attendance should be provided promptly to patients' usual Primary Health Care provider. This will enable the primary health care provider to follow-up with the patient as required and emphasizes that ED care is the management of a 'crisis' in the context of continuing care being provided by primary health care. A strong interface, including schedulable patient visit by EMS specialists at PHC as well as links including electronic links, between Emergency Departments of hospitals and primary health care will facilitate the prompt and reliable sharing of patient information to ensure best patient care is provided.

Expand and sustain numbers of functioning health care facilities (PHCUs, secondary hospitals, and tertiary hospitals) in the country including health care technology and equipments (this section needs to be amended after in-depth analysis and consultation on revising Essential Health Service Package)

[63] EMSS in European union, report by WHO; (http://www.euro.who.int/pubrequest).

The revised essential health service packages (EHSP) dictates the number and type of health facilities alongside the tier system. To achieve the current desired population-to-health facility ratio, a significant expansion of the healthcare delivery infrastructure is required. The required numbers of facilities is shown in **Table 10** and **Table 11**. These projections are based on population of 141,417,000 by 2035 per estimates from the United Nations World Population Prospects report (UN, 2009). These projections assumes that 61% of the population will be located in urban areas in 2035, and 39% will be located in rural areas. Health posts and primary hospitals will serve only rural populations.

Two options are considered for expansion of health facilities in the future; a three-tiered model (current model) and a new model with three-tiers in rural areas and two-tiers in urban areas. Projected number of health facilities in Table 10 is based on applying current norms to future increases in population numbers, without factoring in changes such as improvements in communications and transport infrastructure, which will be substantial over a 20-year period. While a more elaborate modeling of these factors could be done, the basic conclusion that there is a significant infrastructure gap to fill as part of creating an effective Primary Health Care system is certainly robust to such changes.

Table 9. Option 1: Projected number of health facilities in 2035 continuing with current tiers

Facility level	Catchment area	Current # of facilities* (2013)[1]	Projected # of facilities (2035)	Additional needed per year
Health posts	5,000 (rural only)	16,251	11,031	(261)
Health centers	25,000 rural/40,000 urban	3,335	4,363	51
Primary Hospitals	100,000 (rural only)	131	552	21
General Hospitals	1,000,000	122	141	1
Specialized Hospitals	5,000,000	8	28	1

[1]FMOH, Annual Performance report 2013/14
* Includes health facilities under construction

Table 10. Option 2: Projected number of health facilities in 2035 with two tiers in urban areas and three tiers in rural areas

Type of residency	Facility level	Catchment area	Current #	Projected-2025	Projected-2035	New construct/ year/ 2025	New construct/ year/ 2035
Urban	HCs	40,000	xxx	848	2,157		
	General Hospital (till 2025)	1,000,000	xx	34	-		
	Specialized hospital	1,000,000	x	7	86		

Rural	HP	5,000	15,668	15,820	11,031		
	HC	25,000	xxxx	3,164	2,206		
	Primary hospital (till 2035)	100,000	xx	791	-		
	General hospital	1,000,000	xx	79	552		
	Specialized hospital	5,000,000	x	16	11		
Combined rural and urban	HP		16,251	13,786	**11,031**	(244)	(276)
	HC		3,335	3,859	**4,363**	52	19
	Primary hospital		131	689	-	56	
	General hospital		122	178	**552**	6	37
	Specialized hospital		10	23	**97**	1.3	7

In both Option 1 and Option 2, steady growth of health centers (catchment area of 25,000 people in rural areas and 40,000 in urban areas) is needed to increase from 3,335 in 2014 to 4,363 by 2035, adding about 52 new health centers per year. Due to expected urbanization, and health posts serving only rural populations, it is projected that 5,194 fewer health posts will be needed in 2035 than are currently constructed. Hence, some of the health posts can be upgraded to HC.

In both Option 1 and Option 2, aggressive building of hospitals is needed to achieve 552 general hospitals by 2035 in Option 1, and 689 primary hospitals in Option 2 in the first decade which will be upgraded to general hospitals in the decades to come. Some of the general hospitals in option 2 will be upgraded to specialized hospitals while some will serve as HCs after 2025.

The MOH targets above represent the need on expansion of the healthcare delivery infrastructure. Importantly, benchmarks for utilization capacity at each level of the health system should be established and monitored to ensure that the health facility expansion is synchronized with increasing demand for services or availability of key inputs including human, financial, diagnostic, curative and managerial resources. Such ongoing monitoring and adjustments should include assessment of the need and feasibility of moving some health services from hospitals to the Primary Health Care levels as the health system continues to develop.

The MOH in consultation with the RHBs need to have health facility expansion plans that have a master site plan considering future purpose and expansion of the facilities.

The tier system and measuring coverage of health service coverage need to be revised in such a way that meets the demand of the community. The current way of estimating potential health service coverage by Health facility to population may need to triangulate with other essential supply side factors such as population to health professionals by specialty.

It should be noted that the current assumption of Health facility to population ratio will be changed as more human resources, access to all weather road, positive health seeking behavior and technology platforms are improved. Hence, the health facility expansion needs to be commensurate with the overall health sector inputs and needs that will derive from demands of the community.

Figure 30: Current tier system (proposed under option I with some modification)

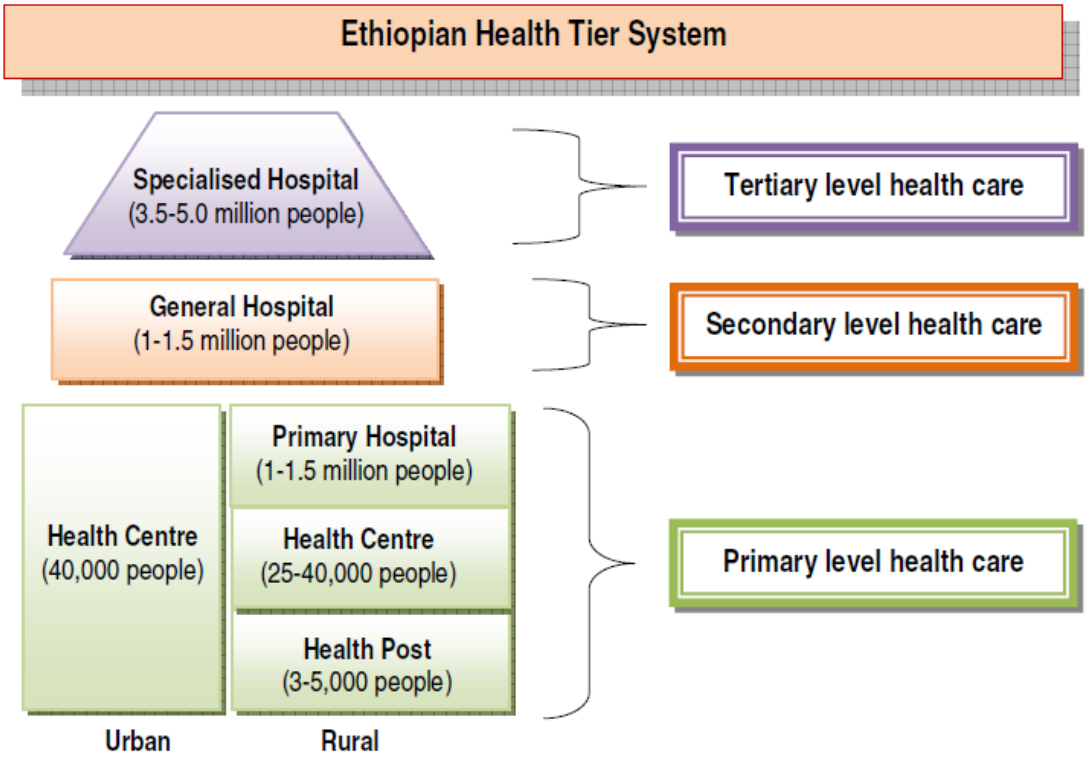
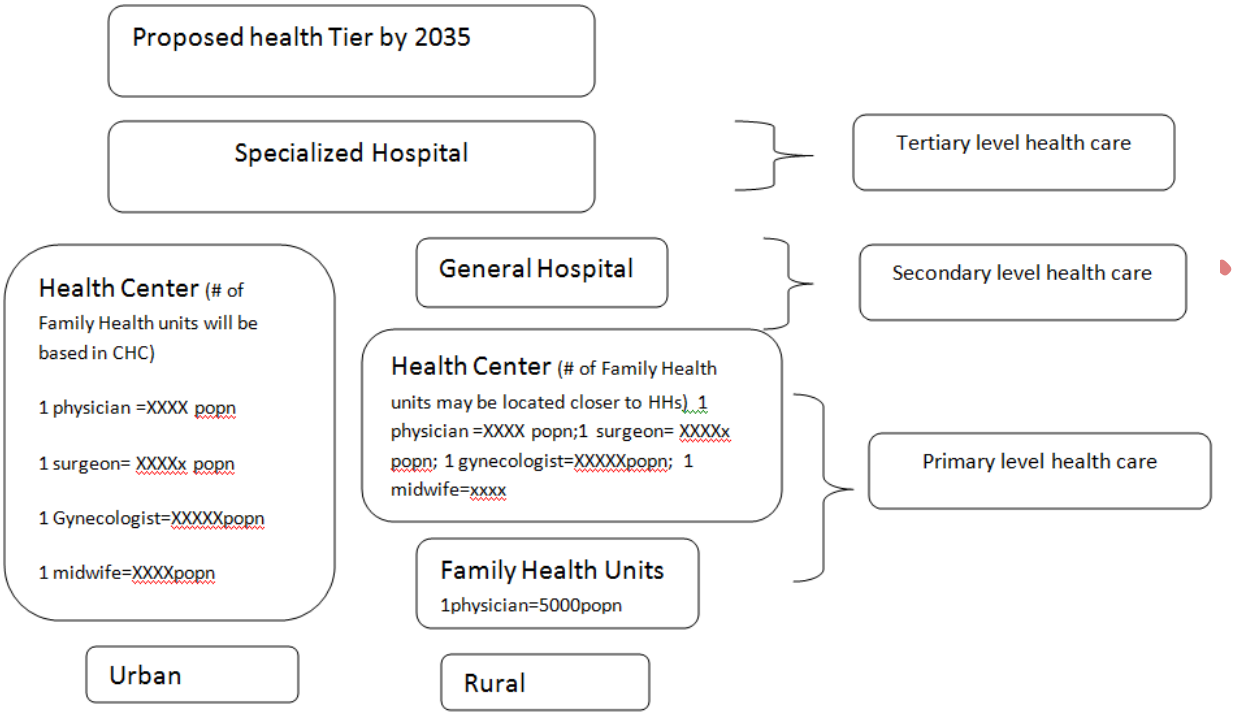


Figure 31: proposed tier by 2035 (option 2)



Health Care Technology Management:

The Alma-Ata Declaration promotes the use of appropriate technologies which are scientifically valid, socially acceptable and universally available to all individuals and families of the community at a cost that the community and the country can afford at all stages of the country's development in the implementation of the PHC[64].

Medical equipments are vital components of the health care delivery as they are associated with diagnostic, curative and rehabilitative devices. These equipments need systems and mechanisms of supply, maintenance and disposal in such a way that patients' safety is granted and resources utilized in efficient and effective manner. The national drug policy of Ethiopia which was developed in 1993 has considered medical equipments and supplies. However, it is not followed up by a comprehensive national health care Equipment and technology strategy that maps out national vision and strategy for placement, maintenance and disposal of medical equipments as well as rational introduction and application of technology. Hence, the MOH need to develop a comprehensive health care equipment and technology policy or strategy that can cope with the need of the nation progressing to be a middle income country soon. Such a policy/strategy followed up with setting up of a functional system represents an essential ingredient for establishing and

[64], Health Care Technology Management, WHO Regional publication, Eastern Mediterranean Series 24.

maintaining up-to-date, cost effective and high quality appropriate health care services. Because of a lack of such a system and mechanism, many developing countries waste precious resources by introducing technologies and purchasing medical devices that are not appropriate to local conditions, substandard, obsolete, and improperly reconditioned or have reduced life expectancies65.

Establish effective management structures in PHCUs and enhance its governance system at all levels of the health system

Establish management structures of the PHCU, which will enable adequate focus on both health promotion and clinical care. The PHCU includes primary hospital and four primary health centers, each serving 25,000. Depending on the density of the population in the catchment area, the health extension staff will either be working in health posts (in more rural areas) or within the health center (in more urban areas). Mobile units or other appropriate delivery models will be needed to serve pastoralist populations.

The health center in both urban and rural settings may need to be directed by a full-time manager, which could be a Chief Executive Officer (CEO) role. The specific organizational structure and reporting relationships with the next higher level can be addressed as part of the reform process of the country; however, focusing on adequate management capacity to ensure effective internal supervision, mentorship, quality improvement, and customer-service oriented organizational culture is paramount.

One approach is for the primary health center directors to report for technical guidance to the primary hospital CEO and to their governing board for strategic and financial support. This will be informed by future development and should remain flexible to accommodate changing demographic and economic conditions.

A performance monitoring system based on key performance indicators should be implemented for the PHCU overall. The key performance indicators may vary by region, zone, or *woreda* but in all cases should reflect both prevention and clinical care indicators. The performance monitoring system should specify the key performance indicators, the method of data collection and reporting, the process of random audits, and assigning time intervals and responsibility for each process. This could build on the experience of the Ministry of Health with key performance indicators in the HMIS and hospital reform. The performance monitoring system should be aligned with other performance management tools being used in evidence-based planning and results-based financing initiatives implemented in different areas.

International experience indicates that establishing the technical, reporting, and accountability relationships in health care systems can be an important factor in systems performance, both in

[65] Health Care Technology Management, WHO Regional publication, Eastern Mediterranean Series 24.

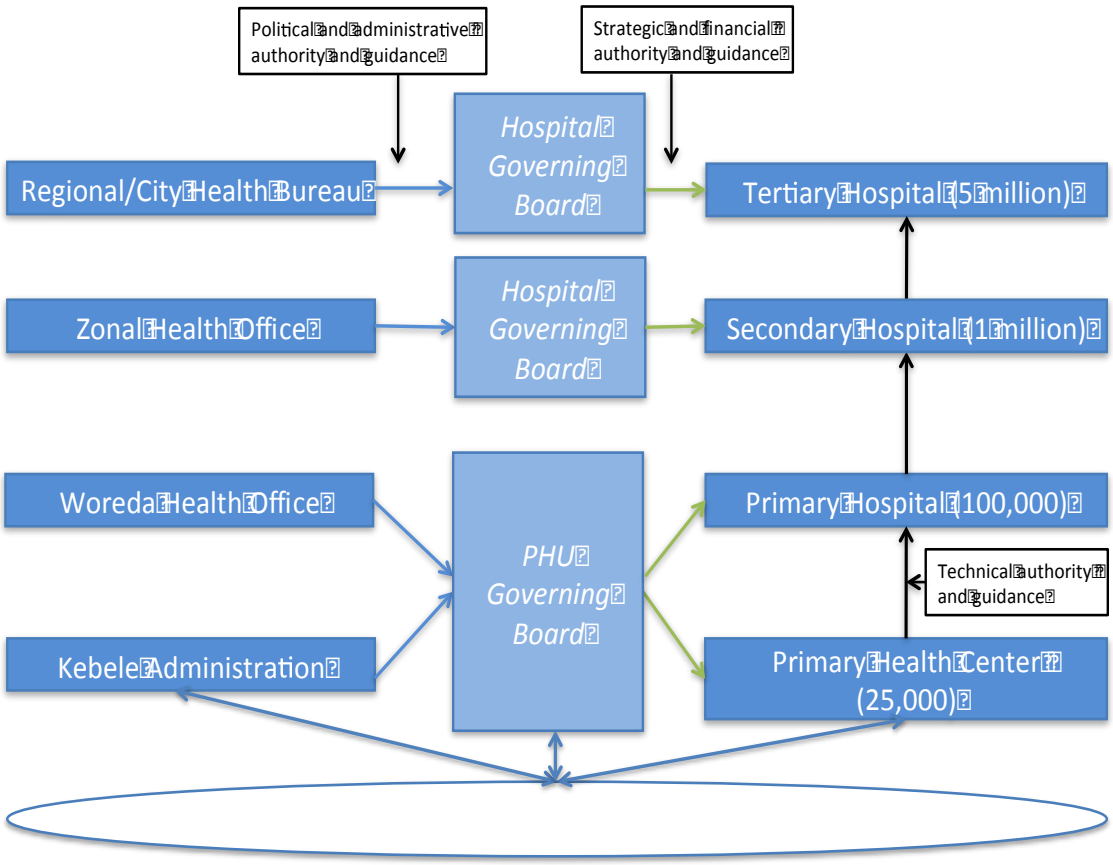
terms of its efficiency and resulting health outcomes. Ethiopia will need to develop sound approaches to health care governance that support its overall objectives.

A strategy that would take advantage of higher-level technical skills but also maintain a population-needs focus would have the health center director report for technical guidance to the hospital CEO and for strategic and financial guidance to the PHCU governing board.

PHCU boards should be comprised of community members and relevant representatives of the relevant *woreda* administration, by which it is authorized. Models should balance adequate representation with manageable size, efficiency, and operating procedures.

The FMOH has been championing investments to strengthen supervision and governance at the hospital level, including the development of supervisory and performance improvement teams at the regional and city level (i.e., the Curative and Rehabilitative Core Process Teams), implementation of health management information systems, planning and reporting processes, and the building of hospital governing board capacity. We recommend that this investment continue, aligning efforts to strengthen the quality of supportive supervision for these ongoing initiatives and expanding their application to the PHCU.

Figure 32. Proposed Governance Structures in 20 Years



Technical guidance and administrative oversight (black arrows)
Primary health center director receives technical guidance & administrative oversight from the primary hospital CEO, who receives technical guidance from the CEO in the secondary hospital, and so on.

Strategic and financial oversight (green arrows)
The primary health centers and primary hospital receive strategic and financial guidance from the PHCU governing board, which is authorized by the relevant *woreda.*

Political and budgetary oversight (blue arrows)
The PHCU governing board receives political and administrative guidance including budget allocation and tracking from the *woreda* and *kebele* administrations.

The health facilities will have direct horizontal accountability to their respective government administrative bodies, e.g. health center with woreda health office.

Establish a team-based approach to Primary Health Care

Regardless of the physical location, Primary Health Care would be better if delivered using a team-based approach. For instance, by customizing the Brazilian model of PHC, this may include 1 family physician, 2 health officers or BSC nurses, and 2 diploma nurses or extension workers responsible for 5,000 people. The qualifications and locations of the members of the team may be adjusted to fit the region and location, allowing responsiveness and adaptability as the population moves and urbanization continues.

Team-based monitoring of quality and payment should be implemented to encourage accountability of the Primary Health Care team for their 5,000 assigned people. Additional recommendations regarding payment models are included in **Strategic Area #5**. Once performance indicators are being reliably monitored, we recommend the introduction of performance-based incentive payments to the Primary Health Care team, to be reinvested in primary health center improvement efforts. Primary health center performance could also be translated into other recognition, which could include a "star" rating system or access to continuing education opportunities for staff.

The shape and operation of the PHCU generally should be adaptable to local circumstances and resources. Examples of possible areas for adaptation include:

- Composition, reach, and mobility of the team
- Equipment and facilities available
- Selection of performance indicators

We believe that the proposed number and skill level of staff in the team based approach will be appropriate to meet the health care needs of an increasingly urbanized population, while still allowing for health extension in rural and pastoral communities.

The strategy may be adapted according to the density of the population in the catchment area. In more remote areas, health posts may continue, upgraded with needed health workers. In more urban areas, health extension workers should work within the health center. In pastoral areas, the extension workers may be linked with veterinary outreach workers in a One Health model.

Establish effective educational programs between the Ministry of Health and Ministry of Education to elevate educational preparation for health workers is needed to develop and support career paths to provide for growth from the current health extension worker role to roles in nursing and midwifery, family physician and specialist physician, or and public health, as proposed in **Strategy 3.2**. Establishing clear educational and apprenticeship requirements as well as expected scope of practices for each role in the primary health centers will be important. In the adminstrative arena, provide growth in management capacity using the Masters in Health Administration (MHA) or related health management/leadeship degree for qualified management staff would improve the leadership of the health sector.

Ensure the health care delivery system is supported by a well-functioning supply chain, heath management information system (HMIS), and innovative health and information technologies

Ethiopia's large population of citizens living in rural areas, coupled with insufficient supply chain management capacity at multiple levels in the supply chain, has brought significant challenges related to procurement and distribution of medicines and medical supplies. The Pharmaceutical Fund and Supply Agency (PFSA), an agency within the FMOH responsible for procuring, storing and distributing all health commodities to public facilities, is in the process of developing and implementing a Pharmaceutical Logistics Master Plan, supported by multiple development partners. This logistics master planning process and the ongoing visioning of the Health Care system should serve as inputs to each other, ensuring alignment among key systems in the future. The Pharmaceutical Fund and Supply Agency (PFSA) is expected to have its own organizational long term strategy to support the overall vision of the FMOH in supply chain management.

The health care delivery system should have a reliable health management system that can monitor progresses for timely actions. The information should be used for making decisions by the service delivery points in which it is generated. Additionally, core support functions of HMIS will be more central as these will be used to regularly monitor performance of the PHCU and, eventually, potentially influence performance-based team payments. Accordingly, ample resources will be required to strengthen and sustain a reliable HMIS.

Innovative medical and information technologies should be explored and integrated into the PHCU and the rest of the health delivery system as appropriate, so that Primary Health Care is flexible and adaptive to new technologies. These may include cost-effective diagnostic technology, electronic medical records, and use of mobile phone technologies. As discussed in **Strategic Area #6,** increased capacity of FMOH in the area of technology evaluation will be needed.

Ensure the PHCU is prepared to handle public health emergencies

Disease outbreaks and natural and manmade disasters are one of the challenges of the health sector. The health system is one of the major sectors responsible for producing a prepared and resilient community, which can continue normal day-to-day life with little disturbance due to shocks from epidemics and other disasters. Hence, strategies and yearly operational plans need to factor in the risk of the hazards (e.g., outbreaks), estimate the likelihood of their occurrence, and develop the capacity in the health sector to address public health emergencies efficiently and effectively.

Currently, the Public Health Emergency Management center (PHEM) is the core entity of FMOH under EPHI in charge of early warning, epidemic preparedness, response and recovery. The role of the PHCU in these functions is fundamental. Disease surveillance for early warning, epidemic preparedness, epidemic investigation and early response needs to be systematically performed at the PHCU with effective communication to higher levels of care and administration.

STRATEGIC AREA #3: Ensure a robust Human Resources Development system that commensurate with socio economic development of the country as LMIC by 2025 and middle-middle IC by 2035 (to be amended after revision of the HRH strategy)

Strengthen mechanisms to develop and retain high quality health professionals (licensure, accreditation, and board certification),

Based on lessons learned in human resource development for health within the country and experience from other countries, it is recommended strengthening mechanisms to ensure high quality healthcare professionals are produced. This will require strengthening existing and potential new platforms including:

1) Improve quality of pre-service training through strengthening skill labs, improving exposure of trainees to practicum sessions and using technology platforms as well as twining with center of excellences within and outside of the country.
2) Strengthening the Higher Education Relevance and Quality Agency (HERQA) accreditation process for FMOH, MOE, and private training programs,
3) Improving human resource regulation through robust licensure and re-licensure process for both health professionals and facilities at all relevant levels. Experience of FMHACA should be explored in-depth to ensure competent and ethically sound health workforce is available in the system.
4) Establishing professional associations with board certification for health care workers,. In the time before professional associations have capacity for board certification, their engagement in continuing professional development programs will be essential to promote provider quality.
5) Institutionalize Continuous Professional Development (CPD)

With the current rate of graduation, there will be hundred thousand health workforce graduated by end of 2035. Hence, it is highly recommended to develop and periodically review a long term HRH strategic plan based on the health service packages, expected facility expansion and available health science colleges.

The health science colleges and universities need to be integral part of the public health system in providing health services, conducting problem solving researches and training of health workforce which making use of public and private health facilities as a training field. Besides, Health workforce training centers can be involved in mentoring and supervision, program evaluation and advisory board participation. Use of Information and Communications Technology (ICT) platforms in pre- and in-service trainings should be considered to improve quality of health science education and health service delivery.

Support growth along defined career paths

Career paths for health personnel should be defined in the HRH plan according to the perceived need of the sector in the future, and well publicized to attract motivated workers to the health sector and inspire them to improve their capabilities over time. Each step in the career paths should be identified with accompanying educational and training prerequisites, and potential compensation and scope of practice. Health Extension Workers are one of the main actors in the PHCU. See **Figures below** for proposed career paths. These should be reviewed annually and adjusted to meet the changing needs for the workforce.

Figure 33. Proposed Career path (to be amended after the revision of the HRH strategy)

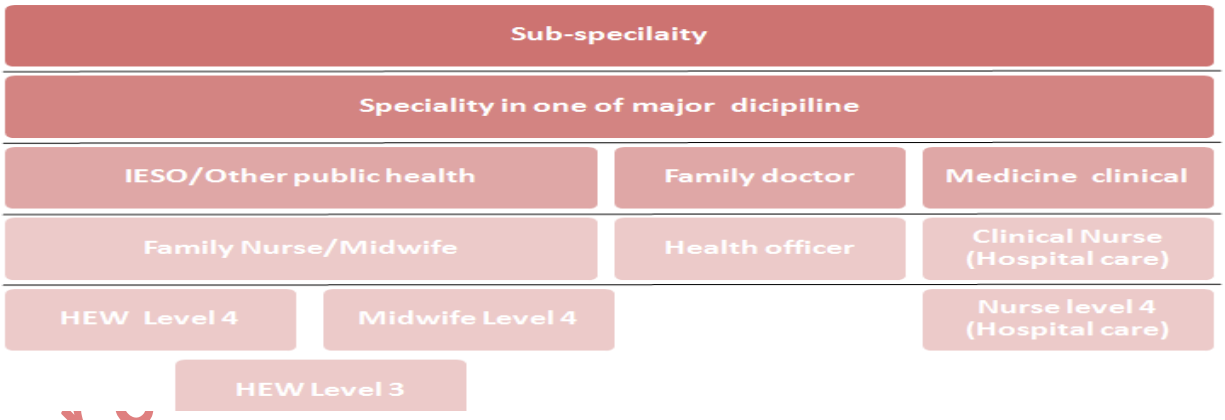
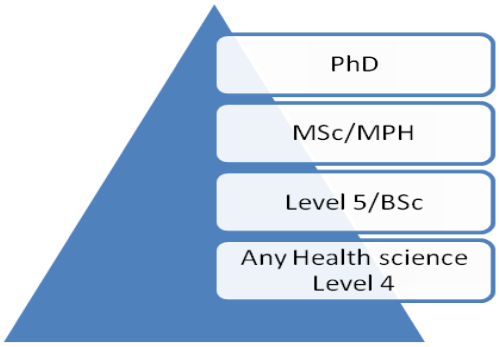


Figure 34. Proposed Career Growth Options for Other Health workers



The upcoming HRH strategy, based on the need of the current and future health sector, is expected to advise the coming five-year health sector strategies. In additional to establishing a professional growth plan for HEWs, there needs to be investment in developing leadership capacity and succession planning as health workers move into an out of positions of practice.

More than 38,000 Health Extension Workers (HEWs) have already been trained and deployed across Ethiopia since 2005. They are playing an important role in delivering a wide range of community-based health promotion, disease prevention services and basic curative services.
It is acknowledged that nearly 50% of national HRH stock is HEWs that will be a potential pool for different level of family health service providers to be organized under family doctors. More than 5000 HEW have been enrolled for level 4 upgrading program so far nationally. Therefore, it is expected that all the current level 3 HEW will be upgraded to level 4 occupational levels in the coming five-year strategic period further progressing either to family nurse, midwifery, public health officer and their career extends to family physician through time.

The demand for specialty services is expected to be very high as the country socioeconomic dynamics changes. Hence, Specialty trainings to various cadre of health workforce need to be well thought and be in place as early as possible in order to satisfy the growing need.

Strengthen the Human Resources Information System (HRIS) for accurate planning

As health facilities, health workforce and the services provided expanded, , it is critical to maintain and update the HRH strategy to ensure adequate planning. Moreover, the Human Resource Information System (HRIS) will require strengthening for accurate identification of gaps and needs as well as health workers in training (health science students) to fulfill the targets set in strategic plans. Processes for data collection, data entry, and analysis are needed, as well as capacity building at regional and federal levels to implement an accurate HRIS.

It is recommend to strengthen the current HRIS to improve coordination between the federal and regional levels. The HRIS should be easy to use, reliable, and easily accessible. One concrete improvement could be to develop the capacity of the HRIS to ascertain the geographical

distribution of health professionals at the national and regional level. The coordination with the Ministry of Education (FMOE) and regional education bureaus is essential to ensure the right type of health professionals with adequate quantity are produced to commensurate the growing need of health workers at all levels.

STRATEGIC AREA #4: Enhance the role of non state actors in improving health status

The overall government direction with regard to non state actors (private for profit, local and international NGOs, civic and professional societies) and their contribution in the health sector should be enhanced as the health needs cannot be addressed by the public sector alone. Besides, health is generally regarded as a public good demanding a concerted effort of all stakeholders.

The major problems of the population remain largely preventable communicable diseases and nutritional problems. However, the change in disease landscape is towards increasing trend of non-communicable diseases while the burden of non communicable disease still prevails. The public sector and development partners have made significant strides in increasing health expenditure in the health sector. According to the fifth NHA, the national total health expenditure increased by nearly six fold in the last decade. However, health is still underfinanced and there is a strong need for making more resources available (NHA, 2014). Leveraging non-state resources through partnership with the private sector particularly with for-profit ones is seen as an opportunity to narrow the resource constraint. By harnessing the existing engagement with the private sector, the government intends to spur the delivery of comprehensive and wellness oriented Primary Health Care services to address the above increasing burden of communicable and non-communicable health threats.

The private health sector in Ethiopia can broadly subdivided into private for profit and private for-not-profit. There are also informal private health care providers such as traditional healers. The public private partnership in the health sector can be effectively materialized in varies mechanisms including partnering in clinical and non clinical services through contracts, leasing, franchising, and social marketing. Moreover, non state actors such as civic and professional associations can play essential role in formulating policies, strategies and legal frameworks and implementing them into actions. The role of local and international NGOs is instrumental in their technical and financial assistance in all cycles of developing the health sector.

Build capacity to develop and manage public-private contracts and partnerships with private providers

Building the capacity of the public institutes at all level to design and mange public-private partnership thereby access and quality of services are further enhanced. ~~strengthen Health Care that complement government programs and to help fill gaps in services provided by the government (e.g., clinical and diagnostic services, tertiary care, medical tourism) is high time.~~

Private health facilities including hospitals, clinics, pharmacies, diagnostic centers and other health sector partners, will increase access to services and leverage resources for health care. Therefore, it is recommended to have a balanced approach in which the public facilities contracts with private sector providers (both for-profit and nonprofit) in areas where the government sector is unable to

fill the demand or where public-private partnerships (PPPs) might be an efficient way to improve quality and access. It is believed that there will be a profound added value if the private for-profit sector take part is in advanced clinical and diagnostic services, pharmaceutical industries and secondary and tertiary care. Engaging private providers may also be beneficial in supporting supply chain by involving transportation and distribution, medical equipment production and maintenance, and providing technology platforms in the health sector. The government is to retain leadership and primary responsibility for availing essential health care; however, the private sector will be engaged as appropriate in supporting the goal of the sector. Additional efforts should be made to develop partnership arrangements with private sector providers to enhance synergy and fill gaps in government services.

A more robust analysis of the cost-effectiveness and feasibility of expanding the public capacity versus utilizing the private sector need to be performed to fill public sector gaps, including a formal procedure that itemizes the costs and benefits of contracting with private providers for guiding future choices. , Partnership arrangement with the private for profit and private-non-profit sectors on highly specialized services with a competitive and mutually beneficial pricing arrangement should be explored which may meet demands more efficiently than increasing capacity of government facilities.

Working with the private sector requires up-to-date information on the development of the sector as well as the ability to develop, monitor, and assess programs to provide incentives for investment and to learn from contractual agreements with non-government entities. Therefore, it is highly recommended on increasing the capacity of the public facilities to manage the development and implementation of PPPs. For instance, this capacity might be developed among an existing government unit such as the Policy, Planning, and Finance General Directorate or through the establishment of a separate PPP unit. Such units would have the capacity to support other government agencies or facilities to contract out services to the private sector as well as manage partnerships between public and private facilities.

Regulatory functions remain vital in ensuring services provided by PPP are up to the standard. Currently, Food, Medicine and health Care Administration and Control Authority (FMHACA) is mandated to execute regulatory activities on food, medicine, environmental health, health professionals, health and health related institution in the country. The health facility regulatory standards are inclusive of all stakeholders including the private health sector. Compliance to regulatory standards would empower the private health sector to self regulate and provide quality health care to the community.

Strengthen the capacity of the health sector to regulate the non-government sector in health

The private sector plays an important role in providing high quality health care, and the demand for these services is expected to grow as Ethiopia transitions into a middle-income country. Without adequate regulation, market forces could result in high cost services of unreliable quality from private providers. The government should strengthen capacities to monitor and regulate the

development of the private health sector at both national and regional levels. Strengthened regulatory capacities would enhance regulatory agencies and professional associations in ensuring that a high quality of care is established at both public and private health facilities.

Encourage private sector to take advantage of an enabling policy environment to invest in health sector

The MoH should encourage investors interested in tertiary care, the pharmaceutical industry, human resource development, medical equipment production and maintenance, diagnostic services, health research and development, use of new health related technologies and medical tourism by working with relevant sectors to facilitate duty free privileges, grace periods for taxation and making loans and land available as per the law of the land permits. The MOH may consider inviting private sector players to work in public facilities as one option for public-private partnership, if found to be feasible.

Increase the engagement of civil society and other nongovernmental organizations in the health sector

Civil society in its literal meaning is an aggregate of non-governmental organizations and institutions that manifest interests and will of citizens. Civil Society Organizations (CSOs) are non-profit "third sector" organizations, which are distinct from government and for-profit business. Civil society refers essentially to the so-called "intermediary institutions" such as professional associations, religious groups, nongovernmental nonprofit organizations, labor unions, and citizen advocacy organizations that give voice to various sectors of society and enrich public participation in good governance. A role for CSOs that have meaningful community representation may participate in the governing bodies of the health sector.

MOH's health sector harmonization and alignment principles is comprehensive enough to allow CSO's role in the health sector and need to be further strengthened with mutual accountability for the beneficiaries. Fragmented planning, budgeting and reporting should be discouraged. All stakeholders, including private partners and CSOs, should have room to be engaged in strategic and annual planning, implementation, monitoring, reviewing and evaluation of programs in the health sector.

The resource mapping exercise of Woreda-based planning needs to be strengthened with better participation, accountability and transparency from both CSOs and the MOH at all levels. The joint consultative forums with donors group may be used to ensure CSOs funded by the donors are working and reporting in line with the priorities of the country.

The international Non Governmental Organizations are expected to continue collaborating in the country lead health sector development plan and its implementation with the principles of harmonization and alignment.

Due attention to traditional medicine

Despite modern medicine becoming more widespread in Ethiopia, a significant number of Ethiopians tend to rely more on traditional medicine. Because traditional medicine is culturally entrenched, accessible, and relatively affordable, up to 80% of the Ethiopian population relies on traditional remedies as a primary source of health care (Kassaye et al., 2006)[66].

The use of traditional medicine by patients presents a unique concern. On the one hand, the concern is practical because so many commonly used traditional remedies have the potential to adversely interact with conventional medicines. On the other hand, the use of traditional medicine brings up the issue of culturally constructed notions of health and illness and demands a place in health care provision discourse.

It is imperative that health care providers are aware of traditional medicines that their patients may be using. Unusual changes in a patient's state of health or reaction to a prescribed medication may be explained by the concurrent use of traditional medicine. Health care providers should closely observe their patients and be conscious of adverse herb-drug interactions.

Due attention also need to be given to the development of the beneficial aspect of traditional medicine including related researches and its gradual integration into modern health care services.

STRATEGIC AREA #5: Develop sustainable financing mechanisms necessary to achieve a better health outcomes

The financing sources of the Ethiopia's health sector include the government treasury at different levels, Official Development Assistances (ODA), out-of-pocket expenditures, nongovernmental organizations (NGOs). The finance generated through these sources are too small to ensure and equitable quality service to all segment of the population as evidenced by per capita health spending of US$ 21 in 2010/11 NHA V (FMOH, 2014).

Cognizant of the scarce resource for health care, the health care financing strategy was launched in 1998 with the primary objective of increasing availability of health care resources to for improved access to quality health care. This strategy has been in place for more than a decade warranting for an in-depth revision considering the following recommendations.

Mobilize resources for health commensurate with per capita spending in lower-middle income countries by 2025 and by upper-middle income countries by 2035

Health has been a priority for the GoE evidenced by the great focus it has placed on expanding the Primary Health Care system through the Health Extension Program (HEP) and massive health science training institutes for about a decade. However, the share of health spending in the

[66] ethnomed.org/clinical/pharmacy/ethiopian-herb-drug-interactions

government budget has remained constant at about 8.5% over the last 4 years, although it has increased in absolute value. Considerable external resources are covering the health expenditure, which has resulted in donor dependency and very high out-of-pocket health expenditures. The dependence on foreign funding raises concerns about the sustainability of Ethiopia's health system particularly the Primary Health Care system in the long run.

The FMOH needs to identify and sustain adequate resource flows to cover current and future costs of health care through sustainable funding mechanisms predominantly from the domestic sources. A domestic revenue mobilization strategy is a key building block for sustainable health financing, especially given the gap between currently limited levels of domestic spending and estimates of resources needed to achieve the MDGs as reported in HSDP IV. In addition, over the twenty-year time frame envisaged here, the government should expect and needs to plan for reductions in external support. Therefore, the MOH should secure greater tax revenue allocations and earmarked funds as well as mobilize community contributions through SHI and CBHI (the latter is discussed further in Strategy 5.4). The GoE has excise taxes on alcohol and cigarettes which is not earmarked for health sector. However, prevalence's of alcohol consumption and cigarette smoking are fairly low and the revenue collected from taxes of such commodities would be much lower than what is being budget for health by the government. In addition, the overall tax base is generally narrow. The GoE is working on expanding the general tax base and the allocation for health from tax revenue is expected to increase as the tax base gets broader.

Besides, innovative financial mechanisms should be explored such as UNITAID's air-ticket levy. Innovative financial mechanism can be non-traditional applications of Official Development Assistances (ODA), joint public-private mechanisms, and flows that either support fundraising by tapping new resources or deliver financial solutions to development problems on the ground[67]. Experience of the Ethiopia's MDG pooled fund should be strengthened by reviewing its successes and challenges. The MDG Fund is pooled funding mechanism managed by the FMOH using the procedures of the Government of Ethiopia. In the framework of the Ethiopia IHP compact, it provides flexible resources, consistent with the 'one plan, one budget and one report" concept, to secure additional finance to the Health Sector Development Programme. It is one of the GoE's preferred modalities for scaling up Development Partners assistance in support of HSDP. The current P4R arrangement with the World Bank needs to be further explored in mobilizing more resource to make the transition due possible donor's withdrawal as smooth as possible.

Current data suggests that Ethiopia is spending about $52 per person per year (in 2005 constant international $ adjusted for purchasing parity power), while the average spending in lower-middle income countries is $253 per capita per year, and in upper-middle income countries, $794 per capita per year. With 7-11% growth in GDP annually, these benchmarks may be achievable with the current percent of GDP (5%-6% including donor funding) being spent by Ethiopia on health care. However, this assumes external funding will be maintained with increasing Ethiopia's GDP (for

[67] The role of innovative financing mechanisms for health, world health report 2010; background paper 12. http://www.who.int/healthsystems/topics/financing/healthreport/InnovativeBP12FINAL.pdf

example it remains a constant share of spending, or government financing increases substantially if external funding even remains constant). Preventing a decline in the percent of GDP spent on health, as external funding declines, will require substantially greater fiscal effort by the government than in recent years. The share of health expenditure out of the country's Gross Domestic Product (GDP) was 4.5% in 2007/08. Similarly, total public sector health expenditure as a percent of Ethiopia's total government expenditure was 5% in 2007/08 and rose to 115 in 2011[68]. This is relatively acceptable level as it was close the WHO recommendation of minimum of 5% of GDP spending on health. Nevertheless, Ethiopia's government spending is less than the Abuja commitment to spend 15% spending government budget on health. This shows that although spending on health is acceptable as compared to WHO recommendations, still there is high dependence on donors for financing of health, and sustainability of health financing could be a real concern. It is also important to note that currently in Ethiopia, sizable number of public health programs particularly those being delivered at Primary Health Care level are considerably dependent on external funds, so the anticipated decline of external funds should encourage allocation of additional public funds specifically for Primary Health Care. The woreda based national planning with improved resource mapping effort should be used as a bargaining tool to have appropriate health budget for primary health care at all levels of budget allocation.

Ensure mutual accountability in utilization of funds from development partners

Ethiopia's health care spending is comprised of close to 50% external funding and another half by domestic funding (including both government funding and out-of-pocket payments). However, a significant share of the external funding is disbursed through the least preferred channel of disbursement known as channel III. Funding through channel III is not in a government account and is not disbursed according to government procedures. The money is expected to finance activities in the government plan. Attempts are underway to capture these resources through a resource mapping exercise of the woreda based national planning. Example of channel III funding includes funding from USG funding through USAID and CDC. In EFY 2004, a total of USD 411 million was disbursed by development partners through the public modalities (channel II) excluding funding through USG agencies of USD 229.61 million (about 36% of disbursement in the year by development partners). Hence, bargaining for channeling the external funds in mutually accountable and better predictable manner will help to ensure better planning and reduce transaction costs with possible better results with the same or less money.

Based on experience from other countries, it is anticipated that reduction in donor funding for health care will happen as the country joins middle income countries. Hence, efforts of mobilizing domestic resources should be intensified to replace and augment funding by external sources However, the MOH should bargain with its development partners to keep the current level of support or even more until the country crosses the level of lower middle income country.

[68] 2014 World Health statistics report, WHO

The health sector will continue to need and certainly be likely to receive continued external funding to maintain the gains made so far in the sector and strive for more successes. Such support will help the country to focus on investing its revenue on productive sectors that can pull the country out of poverty in shortest time as well as improve the social determinants of health such as improve education status and livelihood. Hence, the MOH should keep on mobilizing more resources locally as well as from development partners until the country is able to support the sector adequately, probably at the verge of converting to LMIC. However, it should also be anticipated that external support will eventually decline as it is observed from the experience in lower-middle income countries, total health care funding is comprised of only 2.5% external funding, and upper-middle income countries, which receive almost no external funding for health (0.3%). Hence, ensuring mutual accountability more than ever would create a room of negotiation to avoid the loss of gains made so far; and the foreign aid is replaced by increased domestic funding through time with minimal possible gaps due to transition.

Develop a robust financial projection and monitoring tool covering both external and internal funds to track health care expenditure including those for Primary Health Care services

Given Ethiopia's current inability to monitor all external funds and given the need to have more sustainable domestic resource flows, as stated in **Strategy 5.2**, the FMOH should develop a robust financial projection and monitoring tool of external and internal funds to track and project future health care expenditures. Expenditures tracked would include those for Primary Health Care services in order to ensure adequate support strategies with Primary Health Care approach. This is especially important with more fiscally intensive plans, including building new health facilities and equipping them with the resources and staffing needed to operate. Development of such tool would build on previous work in national health accounting and should be embedded into the strategic planning of the FMOH. Institutionalization of National Health Account and financial forecasting mechanism will be instrumental. Several other countries in the region have been advancing on work in this area, such as Uganda and Egypt. Middle-income countries in Asia and Latin America have already established routine tracking mechanisms (World Bank, 2010).

Expand pooling and purchasing mechanisms to accelerate progress towards universal coverage using health insurance schemes

Global experience has demonstrated that increasing prepayments without effective pooling and payment mechanisms may lead to poor program performance, including waste and cost escalation. The FMOH needs to develop capable organizations and processes that can collect contributions and effectively use these contributions to purchase services in ways that support overall system objectives, while promoting efficient and high quality healthcare services. CBHI and SHI are key mechanisms leading the potential development of these organizations and processes as Ethiopia expands coverage with prepaid schemes. The roll-out of efforts to strengthen prepaid financing should be accompanied by a robust learning process drawing from the successful experiences of

other countries in both design and implementation of new financing strategies related to SHI and CBHI.

Social Health Insurance. Ensuring that new SHI schemes, such as that for civil servants, are designed to pay the full costs of services provided by public facilities requires good cost information and payment mechanisms that cover full costs. If this is not accomplished, SHI schemes will draw additional government subsidies rather than providing net financing gains. If subsidies are needed, it is best to subsidize contributions to premiums (as transparent benefits to employees) rather than services for covered populations because subsidies for services are often hidden and difficult to change in the future. This is a challenge in the current system, where fee-exempt services such as antenatal care and access to antiretroviral drugs, are not covered by SHI, leading to potential gaps in the future when donor funds for these services decline. Government subsidies for insurance contributions may be desirable, in particular when targeted to more needy populations, but such subsidies will increase the need for further government revenue mobilization for overall health spending and can compete with Primary Health Care resource needs. For a viable SHI, the government should treat its contributions to the scheme as those of an employer (subsidizing premium contributions), rather than as part of the government program budget.

Although SHI may seem like an effective way to raise revenue for augmenting government spending on health, SHI carries significant risks. If legislators increase SHI entitlements more than they are able increase contributions (even from upper-income people), the deficit must be covered by the government budget. Hence, in developing SHI, a mechanism for ensuring that entitlements are affordable and that SHI is not subsidizing wealthier people's expensive care is paramount to creating a sustained, effective SHI program. Importantly, to optimize revenue generation while promoting continued access to services, further testing is needed to introduce a tiered premium schedule based on household income and assets.

The design of contracts between providers and the insurance fund regarding how health care providers are paid could affect the quality of care and costs of services provided. Globally, countries use different payment mechanisms and these have important effects on access, quality, and efficiency. **Table 11** summarizes the impact of several types of payment methods including FFS (Fee for Service) and PRP (Performance Related Payment). In the coming years, Ethiopia will have rich opportunities to learn best practices in the design and implementation of payment methods through CBHI, SHI, and results-based financing projects such as those being developed as part of the new World Bank-IDA project.

Table 11. Impact of Selected Payment Methods

		Possible impact on health sector performance				
Payment characteristics	*Risk with*	*Access /financial protection*	*Quality*	*Spending volume*	*Efficiency*	*Administrative simplicity*
Line item	Provider[a]	+	+	+++		+++
Salary	Purchaser	+	++	+++	+	+++
FFS	Purchaser	++	++			
Per Diem	Purchaser	++	+			+
Per Case	Provider	+	++	+	+++	
Global Budget	Provider		++	++	+	+
Capitation	Provider*	+	+	+++	+++	+
PRP	Purchaser	+	++	+	+	+

a. Depends upon whether budget rules are "soft" or "hard."

Source: (Langenbrunner, J. and X. Liu, 2004)

The insurance agency administering the SHI or CBHI will need to determine the best payment modalities as well as monitoring mechanisms (to ensure that the population receives the health provisions needed, along with carefully designed contracts between provider and insurance fund) for both the SHI and CBHI that would be most effective for the public and private sectors. Additionally, capacities to manage contracts and monitor providers need to be developed. These administrative costs will also need to be financed.

Community-Based Health Insurance. CBHI pilots currently being implemented demonstrate that it can be an effective approach for reducing the burden of health care costs of rural households in Ethiopia. CBHI support and further expansion is part of the GoE's overall financing strategy for the short to medium term, although as countries approach the middle-income level, these schemes have largely been replaced by more formal coverage schemes managed under SHI. CBHI can also be designed to support other community mobilization and public health strategies such as those outlined under **Strategic Area 1**.

Although still in the pilot phase, CBHI needs to have a sustainable design and administration in order to limit risks to community funds. Administrative costs of CBHI schemes could become burdensome as it is expanded with ratios of administrative costs to revenue generally varying from 5% to even 17% for CBHIs (Carrin, 2003).

In Ethiopia, as in countries around the world, CBHI has a great exposure to risks compared with SHIs. Several strategies for greater risk-pooling can provide sustainable financial protection to households insured under CBHI schemes. **Table 12** outlines several strategies to protect the CBHI scheme from possible bankruptcy.

Table 12. Strategies for financially stable CBHI

Strategies	How protect CBHI
Reinsurance	Insure against high-level expenditure with a re-insurer to expand the size of the risk pool.
Begin with large risk pools	Target district populations instead of villages, potentially minimizing the need to reinsure
Partner with local/central government	Adequately finance the health service benefits from agreed benefits package.
Progressive scale-up	Over time, create larger risk pools by consolidating schemes over large populations, limiting the need to reinsure.

Source: Carrin, 2003

Most immediately, retaining and managing funds at the level, where current health administration capacity is greatest (at regional level as opposed to the *woreda*) may be the most direct route to an increased the risk pool, and would allow for continued growth as CBHI is rolled out zone-by-zone in each region.

With voluntary insurance schemes, adverse selection could lead healthy individuals to discontinue insurance while those with more illness apply for the scheme. Sustainable implementation of CBHI would require members to provide continuous monthly payments, including back payments as needed. Hence, awareness creation efforts on solidarity should be intensified building up on supportive traditions of supporting each other within the community. Preliminary evidence has shown that *woredas* may have difficulty enforcing these payments in low-income communities and in communities with seasonal variation in income. Promoting prepayment into the CBHI during harvest times may alleviate this problem.

As Ethiopia transitions to a middle-income country, a shift from a predominately informal sector to formal sector will occur, and, as this occurs, the CBHI schemes may be progressively integrated into more formal financing schemes with larger risk-pools such as SHI.

The Ethiopian Health Insurance Agency is expected to produce an implementation manual addressing the above-mentioned suggestions, involving the private sector as service provider and insurer, gate keeping mechanisms to efficiently use the PHCUs and reinsurance systems.

Integrate efficiency gains into the comprehensive health financing strategy

In 2008, the Government of Ethiopia went through structural changes as part of the civil service reform program and implemented Business Process Reengineering (BPR). Additionally, the MOH has formalized the Harmonization Plan ("one plan, one budget, one report") to align donor funding to its overall health priorities. Despite these efforts, efficiency gains could be made that would free up resources to support priority health care services. Ethiopia has demonstrated an efficient health delivery system by achieving remarkable health outcome with little per capita health expenditure.

Community contribution, enhanced partnership, sound public policies and strategies alongside commendable leadership in the health sector have resulted in achieving much with little.

It is recommended that the MOH develop capacity to identify and assess the potential financial contributions from specific efficiency measures and to integrate efficiency gains into the comprehensive health financing strategy. This would result in reducing unnecessary expenses due to bottlenecks and duplication. Opportunities to achieve efficiency gains may include:

- Sustaining efforts in health care facilities and MOH where successful;
- Pro-active performance monitoring and performance-based financing at the facility-level and supportive responses to improve productivity;
- Investment in communication and transportation systems to ensure care is provided at the most cost-effective level; locate new facilities strategically to be accessible to larger populations via new transportation lines; explore potential for communications technology to extend Primary Health Care delivery capacities;
- Assuring adequate equipment and space in order to maximize productivity of human resources;
- Strengthening financial management systems and accountability mechanisms to ensure that funds are used for purposes intended and that the costs of financial management and administration are minimized;
- Focusing on interventions that are cost-effective.
- Emphasis for integrated service delivery modalities

STRATEGIC AREA #6 Develop capacity in the health sector to be responsive to changing economic, social, environmental, technical, and epidemiologic context

Ethiopia's path to achieve UHC through Primary Health Care that commensurate to its anticipated middle-income country conditions will require the commitment and evolution of government to capacitate health and health related institutes that can carry out the critical functions of health sector.

Build the leadership and governance capacity of the health sector to effectively support the efforts of achieving UHC through Primary Health Care vision and strategies

Governance in health is being increasingly regarded as a salient theme on the development agenda. Leadership and governance in building a health system involve ensuring that strategic policy frameworks exist and are combined with effective oversight, coalition-building, regulation, attention to system design and accountability. The need for greater accountability arises both from increased funding and a growing demand to demonstrate results. Accountability is therefore an intrinsic aspect of governance that concerns the management of relationships between various stakeholders in health and health related sectors, including individuals, households, communities, firms, governments, nongovernmental organizations, private firms and other entities that have the

responsibility to finance, monitor, deliver and use health services[69]. Hence, building the capacity of leaders of the MOH, RHBs, district health offices and health facilities is curtail to ensure enabling environment and supportive mechanisms are created to achieve UHC.

The organization structure of the health sector including that of the MOH, RHBs and District Health Offices is expected to be evolving with emerging new challenges and opportunities to ensure good governance in the health sector. As Ethiopia develops into a middle-income country and the Health Care system evolves, new areas of focus (e.g., non-communicable diseases, PPP development and management, inter-sectoral collaboration for health, community engagement in Primary Health Care governance) may require new organizational structures. The MOH, RHBs and District Health Offices should periodically review their own organizational structure seeking for continuous improvements. This should include learning from experiences within the country and other middle-income countries.

The leadership at all levels should be engaged in a continuous process of knowledge and skill development to enable them to manage new challenges and address new areas of priority. Hence, in-service capacity development for managers/leaders at different levels should be developed. Such capacity of the leadership particularly at district level and multi-sectoral collaboration coupled with organized community mobilization can ensure transformation of districts in both social and economic dimension and transform the nation at large with minimal possible disparity. The districts are the main working floor where health policies, strategies and reforms are translated into actions. Hence, the health sector need to strategically place the agenda of District Health Transformation Program (DHTP) in the coming strategic plans with a due consideration of peculiarity of each district and sprit of intimate collaboration among districts. The existing district health management initiative can be further strengthened and serve as a starting point to move to a more transformative program.

Develop capacity to produce and use evidences generated locally and globally for setting strategic directions and policy making

It will be important to enhance the MOH's ability to evolve as a learning organization that can lead national policy and program development. Experience in other countries suggests that this requires development of a strong organizational locus or knowledge management unit that can gather and process evidence on policy and program innovation from within and outside Ethiopia and use that evidence to formulate policies, strategies and options for decision makers at all levels. The Ministry should strengthen the Policy and Planning Directorate to perform policy analysis through triangulating HMIS data with evidences generated by surveys and surveillance data including those of Demographic Surveillance Sites (DSS) run by local universities. Similar units should be strengthened within the Regional Health Bureaus and in other relevant institutes as well. The scope of such unit should include assessing the implications of epidemiological and demographic trends for Ethiopia's health policy and systems development, synthesizing lessons learned from health services and health systems research, monitoring trends in health care financing and research on

[69] http://www.who.int/healthinfo/systems/WHO_MBHSS_2010_section6_web.pdf

health financing efficiency and effectiveness, and evaluating the impact of new innovations on health outcomes and efficiency. The objective of the unit should be on improving the strategic and policy response of the MOH, Regional Health Bureaus and relevant others to evolving health and health care sector conditions, emerging and re-emerging trends in Ethiopia.

There are different information systems in place so far including a health management information system (HMIS), a logistics management information system and a human resource information system. There is a need to link these systems into a comprehensive health information system.

Evaluation of Health care technology need to be given due emphasis as health care technology is among the main tool to transform health care and rapidly changing. Hence, the MOH needs to strengthen its capacity to manage health care technology including evaluations to introduce new technologies into the system.

Ensure capacity of agencies of MOH (EPHI, FMHACA, PFSA, EHIA and relevant others) to be able to provide the required support for efficient and effective Primary Health Care and other health service delivery needs including health service regulation, logistics, and research and administration of health insurance

Health Research

As it seeks to attain middle-income status, Ethiopia will face the pressing challenge to strengthen its capacities to generate new knowledge from its own diverse experiences. Currently, Ethiopian Public Health Institute (EPHI) is the main government body charged with this responsibility. Its capacities should be further developed, particularly in the areas of health services, health systems research and socioeconomic determinants of health. EPHI should have strong in-house capacity in health economics, health management, epidemiology, and evaluation researches. It should also have the capacity to contract expertise in these areas and to partner with domestic and international agencies.

As indicated above in section 6.2, health technology evaluations or assessments will be an increasingly important concern as Ethiopia scales up clinical services and health care coverage. EPHI or other appropriate government agency should have the capacity to advise the MOH on adoption of new technologies related to clinical care and diagnostics, among other areas.

Over time the scope of demands on EPHI will likely expand given changing health, economic, and social conditions. EPHI's organizational structure may also need to evolve with these increasing demands, potentially into a set of linked but somewhat independent institutions along the lines of a "National Institutes of Health" model.

The Public Health Emergency management component of EPHI should be strengthened and function as public health intelligence unit of the country. All ranges of public health emergency management from early warning to recovery of health emergencies should be capacitated.

Pharmaceutical and other health commodity supply

Continuous supply of health commodities for end users is critical for the health facilities to deliver the health care per their standard. Stock outs of essential drugs should be eliminated at all levels. The logistics management system should able to ensure timely procurement, proper storage, distribution and appropriate consumption and projection reports. The Pharmaceutical Fund and Supply Agency (PFSA) is an agency of the MOH tasked to ensure essential supplies are available at all levels. Hence, PFSA is expected to update its strategic plans according to the overall vision and strategy of MOH.

Alongside availing medicines, lab reagents and other supplies, it would be necessary to introduce auditable system of ensuring the items are reached to the intended beneficiaries. A good example is Auditable Pharmaceutical transactions and services (APTS) started in few facilities in some regions of Ethiopia.

Ensure regulatory frameworks (FMHACA) are supportive of the health sector development plan

The Food, Medicine and Health Care Administration and Control Authority of Ethiopia (FMHACA) established by regulation as an independent regulatory arm of the FMOH to

- protect the Public health from unsafe, inefficacious and poor quality modern and traditional medicines
- protect the public from health risks emerging out of unsafe and poor quality food
- avert health problems due to substandard health institutions, incompetent and unethical health professionals, poor environmental health and communicable disease
- control and deter illicit production, trafficking and use of narcotic drugs, psychotropic substances, and precursor chemicals

The scope of FMHACA includes setting standards, registration, licensure, and regulation issues that have relation with food, medicine, environmental health, health professionals, health and controllable health related institutions. The capacity of FMHACA should significantly be improved in order to carry out these huge tasks with adequate and right mix of human resource and technologies. It is recommended that FMHACA develops long term strategy that go along with the pace of the health sector in the future.
Post marketing surveillance
Rational use of drugs

Develop capacity to implement insurance schemes that reduce financial barriers to health-seeking and promote equity and access

The Ethiopian Health Insurance Agency (EHIA) is a government agency tasked with implementation of the health insurance proclamation, which aimed to enable all the working society and pensioners to get health insurance. The agency is currently setting up offices in various parts of the country to begin implementation of social health insurance in the near future. The health insurance schemes under development are expected to cover essential health service packages at the PHCU and higher-level facilities. The visioning exercise has identified health insurance as one of the main strategic focus areas in the coming years. Inequalities in access to basic health services are an anticipated challenge as the country develops into a middle-income country. Therefore, the

EHIA need to design the insurance schemes to reduce financial barriers to health care and ensure equitable access.

Improve capacity of MOH at all level to proactively engage in multi-sectoral activities

The health sector needs to proactively engage other sectors to maximize impact by integrating relevant interventions, leveraging resource and coordinating activities. Health promotion and diseases prevention efforts, nutrition, environmental health including water, sanitation, hygiene and occupational health, human resource development for health, and engaging the private sector are among the main areas of inter-sectoral collaboration. Hence, the MOH, at all levels, need to further strengthen the existing multi-sectoral create a mechanism and capacitate its staff to proactively engage relevant sectors.

The MOH needs to advocate for the health-in-all-policies so that a comprehensive and sustainable development commence. Regardless of the approach, all strategies to implement inter-sectoral action should consider three cross-cutting issues fundamental to any public policy.

- First, inter-sectoral action depends highly on the context – political, economic, and cultural – and it is also affected by the characteristics of the targeted issue.
- Second, political will and commitment from all levels of government and all sectors is required to allow a shared policy framework for concrete actions and policies to be established and applied.
- Third, the establishment and reinforcement of accountability mechanisms which can be used to evaluate the overall health-related performance of the sector policy.

Therefore, the MOH need to build its capacity to conduct self assessment, assessment and engagement of other sectors, analyzing area of concerns, and selecting an engagement approach to develop engagement approach and policy and monitor progress. The MoH need to improve its bargaining capacity for participatory budgeting that enable other sectors to contribute for the general well being of the public. Areas of multispectral collaboration for the health sector include:

- Nutrition and agriculture
- Non Communicable Disease (NCD)
- Urban planning
- Climate change and Climate resilience health systems
- Emergencies
- Water and sanitation
- Education

Role of universities in improving the capacity of the health system particularly to manage PHC in efficient and effective manner

Universities of Ethiopia can play a crucial role in shaping the health system particularly the PHC through giving due emphasis for PHC in their in-service trainings to make it a valued specialty and a scholarly discipline. Local universities can also play important role in supervision and mentoring of nearby health facilities including the PHC units in parallel with teaching and exposing their

students to PHC system. Besides, universities need to conduct researches that benefit the health sector in availing quality health care service to the community mainly through the PHC.

Use of scientific advisory committee

Ethiopia has highly educated and experienced citizens in the health sector and expatriates who can contribute for the betterment of the health sector. Having Scientific Advisory Committee for MOH is essential to review existing policies and craft new ones on emerging healthcare scientific developments and their technical, ethical, legal, social and economic implications as well as on critical health and health related issues

Its membership needs to include representation from all relevant stakeholders. Such forum provides a forum to consider and develop coordinated advice across the wider science, health and academic communities to help set priorities in response to new developments and public health critical matters.

References

Bezuhun, A., Tebekaw, Y. (2011). Inequalities in childhood immunization coverage in Ethiopia: Evidence from DHS 2011. http:// paa2013.princeton.edu/papers/130272. DOA: May 21, 2013

Bradley EH, Byam P, Alpern R, Thompson JW, Zerihun A, et al. (2012) A Systems Approach to Improving Rural Care in Ethiopia. PLoS ONE 7(4): e35042. doi:10.1371/journal.pone.0035042

Bray F, Ren JS, Masuyer E, Ferlay J. Estimates of global cancer prevalence for 27 sites in the adult population in 2008. Int J Cancer. 2013 Mar 1;132(5):1133-45. doi: 10.1002/ijc.27711. Epub 2012 Jul 26.

Carrin, Guy. (2003). Community Based Health Insurance Schemes in Developing Countries: facts, problems, and perspectives. World Health Organization, Geneva, Discussion Paper, Number 1, 2003.

Central Statistical Agency [Ethiopia] and ICF International. (2012). Ethiopia Demographic and Health Survey, 2011. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ICF International.

Central Statistical Agency [Ethiopia] and ORC Macro. (2006). Ethiopia Demographic and Health Survey 2005. Addis Ababa, Ethiopia and Calverton, Maryland, USA: Central Statistical Agency and ORC Macro.

Center for National Health Development in Ethiopia, Columbia University. (2011a). Ethiopia Health Extension Program Evaluation Study, 2005-2010, Volume-I. Household Health Survey. Addis Ababa, Ethiopia: Center for National Health Development in Ethiopia, Columbia University.

Center for National Health Development in Ethiopia, Columbia University. (2011b). Ethiopia Health Extension Program Evaluation Study, 2007-2010, Volume-II. Health post and HEWs performance Survey. Addis Ababa, Ethiopia: Center for National Health Development in Ethiopia, Columbia University.

Collins, C., Araujo, J., & Barbosa, J. (2000). Decentralising the health sector : issues in Brazil, 52, 113-127.

Ethiopia Central Statistical Agency and ICF International (2012). 2011 Ethiopia Demographic and Health Survey: KeyFindings. Calverton, Maryland, USA: CSA and ICF International.

Fernando, T., Rannan-Eliya, R.P. & Jayasundara, J. M. H. (2009). Sri Lanka Health Accounts: National Health Expenditures 1990-2006. Health Expenditure Series No. 1. Colombo, Institute for Health Policy.

Fernando, L., & Sampaio, R. (2010). The Brazilian health system : highlighting the primary health care reform. Italian of Republic, 7(4), 359-368.

FMOH. (2010). Ethiopia's Fourth National Health Accounts 2007/2008. Addis Ababa 2010. Federal Democratic Republic of Ethiopia Ministry of Health.

Ethiopia Federal Ministry of Health (FMOH) (2011). HSDP IV Annual performance report, Ethiopian Fiscal Year 2003 (2010/2011) version 1.
Institute of Policy Studies (2010). Millennium Development Goals Sri Lanka: Country Report 2008/2009. Colombo : Institute of Policy Studies of Sri Lanka, 2010. –168p. ; 30 cm

International Diabetes Federation (2012). *IDF Diabetes Atlas, 5th edn, 2012 Update.* Brussels, Belgium: International Diabetes Federation. <http://www.idf.org/diabetesatlas>. Accessed April 3, 2013

International Diabetes Federation (2012b). *IDF Diabetes Atlas, 5th edn: A summary of the figures and key findings.* Brussels, Belgium: International Diabetes Federation, 2012. Powerpoint accessed April 3, 2013.

Jayasekara, R. S., & Schultz, T. (2007). Health status, trends, and issues in Sri Lanka. Nursing & health sciences, 9(3), 228-33. doi:10.1111/j.1442-2018.2007.00328.x

Kettler, R.C, Aguilar-Gaxiola, S., Alonso, J., Chatterji, S., Lee, S., Ormel, J., Üstün, B., Wang, P. (2009) The global burden of mental disorders: An update from the WHO World Mental Health (WMH) Surveys. Epidemiologia e Psichiatria Sociale, 18, pp 2333 doi:10.1017/S1121189X00001421

Langenbrunner, John C. and Liu, Xingzhu. (2004). "How to Pay? Understanding and Using Incentives". Health, Nutrition, and Population Family (HNP) Discussion Series of World Bank's Human Development Network. September 2004.

Ministry of Education - Ethiopia (2009). The Education Sector Policy and Strategy on HIV&AIDS: Responding to the Challenges of HIV&AIDS in Ethiopia. http://info.moe.gov.et/pdf/hivap.pdf. Accessed: January 30, 2013

Ministry of Finance and Economic Development (MOFED) (2012). Growth and Transformation Plan (2010/11-2014/15), Annual Progress Report for F.Y. 2010/11. Ministry of Finance and Economic Development, Addis Ababa: June 2012.

Ministry of Healthcare and Nutrition (MHN), 2007. "Health Master Plan 2007-2016: Healthy & Shining Island in the 21st Century".

Paim, J., Travassos, C., Almeida, C., Bahia, L., & Macinko, J. (2011). The Brazilian health system: history, advances, and challenges. Lancet, 377(9779), 1778-97. Elsevier Ltd. doi:10.1016/S0140-6736(11)60054-8

Population Reference Bureau. (2010). 2010 World Population Data Sheet. Washington, DC. Retrieved from: http://www.prb.org/pdf10/10wpds_eng.pdf. DOA: May 7, 2013.

Tulane School of Public Health (2010). http://tulane.edu/publichealth/internut/upload/Situation-Analysis-Ethiopia_10-21-10.pdf. Accessed January 30, 2013.

UN. (2009). World Population Prospects: The 2008 Revision. United Nations: New York. Retrieved from: http://www.ethiopianreview.com/2009/world-population-prospect-un-report-2008-revised-2009.pdf DOA: January 31, 2013

Unknown (2009). *Final Draft* – A Strategy for the Development of School Health and Nutrition in Ethiopia. *March 17, 2009*

UNICEF, WHO, World Bank, UN DESA, UNPD. (2011). Level & Trends in Child Mortality. Report 2011. Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation.

Victora, C. G., Barreto, M. L., Leal, C., Monteiro, C. A., Schmidt, M. I., Paim, J., Bastos, F. I., et al. (2011). Health in Brazil 6 Health conditions and health-policy innovations in Brazil : the way forward. The Lancet, 377(9782), 2042-2053. Elsevier Ltd. doi:10.1016/S0140-6736(11)60055-X

Wang H, Yu L, Zhu Y, Xue L, Dale M, Sipsma H, Bradley EH. Health insurance benefit design and healthcare utilization in rural China. PLoS One 2012; PLoS ONE 7(11): e50395. doi:10.1371/journal.pone.0050395.

Withanachchi, N., & Uchida, Y. (2006). Healthcare rationing: A guide to policy directions in Sri Lanka. Health Policy, 78(1), 17-25. doi:10.1016/j.healthpol.2005.08.009

Wjst, M., Boakye, D. (2007). Asthma in Africa. PLoS Med 4(2): e72. doi:10.1371/journal.pmed.0040072

World Health Organization. (2008). Revitalizing Primary Health Care Country Experience: Sri Lanka. Retrieved from http://www.searo.who.int/LinkFiles/Conference_SRL-5-July-08.pdf. DOA: July 1, 2012

World Health Organization. (2010). Brazil's march towards universal coverage. Bulletin of the World Health Organization, 88(9), September 2010, 641-716.

World Health Organization. (2010b) Ethiopia Factsheets of Health Statistics 2010. http://www.who.int/countries/eth/en/. DOA: 22 May 2013

World Health Organization, 2011. "Country Cooperation Strategy". WHO/CCO/11.05/Sri Lanka. Retrieved from http://www.who.int/countryfocus/cooperation_strategy/ccsbrief_lka_en.pdf. DOA: July 1, 2012.

WHO. (2012). *Thai Health Promotion Foundation and Earmarked Tobacco Tax*. SEARO, WHO. Retrieved from: http://www.searo.who.int/LinkFiles/TFI_thf.pdf. DOA: December 5th, 2012.

WHO (2012b) 2007 - 2012 Global Health Observatory Data Repository. World Health Organization. http://apps.who.int/gho/data/node.main>.DOA: 18 Dec. 2012.

WHO (2012c) "Antenatal Care Coverage -- at least 4 visits (%)." Global Health Observatory Data Repository. 2012. World Health Organization. http://apps.who.int/gho/data/node.main>.DOA: 18 Dec. 2012

WHO, UNICEF, UNFPA and the World Bank, Trends in Maternal Mortality: 1990 to 2010, WHO, Geneva, 2012.

World Bank. (2010). Promoting the Institutionalization of National Health Accounts: A Global Strategic Action Plan. Prepared for discussion at the Global Consultation: Promoting the Institutionalization of National Health Accounts in Washington, DC on October 20–21, 2010.

World Bank. (2012b). World dataBank, World Development Indicators (WDI) & Global Development Finance (GDF). Retrieved from: http://databank.worldbank.org/ddp/home.do. DOA: November 27, 2012

APPENDIX

Appendix A: Visioning Committee Report

Appendix B: Situation Analysis

Appendix C: Stakeholder Interview List

Appendix D: Convening Report

Appendix E: Input from Programs' Technical Working Group

Appendix F: Proposed demonstration projects and further study area