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Decentralization And Health Sector Reform: Lessons from Ethiopia

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Abstract

Background: Decentralizing health sector, division role, power and authority of decision making in public health issue from top to lower structure, is the key means of improving community health status through which health sector reform of one country is achieved. Hence this study is aimed to address Decentralization and Health sector reform in Ethiopia.

Objective: To express health sector reform achieved in Ethiopia as a result of decentralization and list all health reform indicators specifically in human resource and finance during the past three decades.

Methods and Materials: This study was conducted using four purposely selected reliable reports and articles as a source by focused on the two main reforms activities that have been achieved through health sector decentralization in Ethiopia; Financial health sector and human resource health sector reform in Ethiopia. Because the rest health sector reforms are included under these two main reform activities. To intensify evidences of this study, additional Federal ministry of health annual reports and other documents were used. After important information was extracted and generalized from these documents, vital points of reforms achieved in the past three decades were summarized at the last literature of this study. Overall parts of this study was accomplished between May 11,- 30, 2020

Findings: The major indicators of Ethiopian health care financing reform include**:** Retaining and using region's internally generated revenue, Practice of Outsourcing of nonclinical services in public hospitals, introduction of fee waiver and exemption systems, establishment of a private wing in public hospitals and health facility autonomy through establishment of governing bodies. Human resource reform in Ethiopian health sector include Health Extension Program (HEP) improved community health toward family planning, antenatal care, maternal health care, and hygiene and sanitation significantly, between 2005-2010, task-shifting and scaling-up of mid-level health professionals, which intended to delegate tasks to existing or new cadres who receive either less training or narrowly tailored training, utilization of non-teaching hospitals as training centers: health officers and emergency surgical officers, training mid-level professionals with nurse-level entry, focus on mid-level health professionals and local recruitment.

Conclusion: Finding of this study concludes that in Ethiopia, in the past three decades, there was significant health sector reform mainly in the two major dimension; toward financial and human resource. Toward financial, it was aimed to improve community health through affordable cost in the continuous line of service access and availability which guarantees health status of the community. Toward Human resource, HEP, the major avenue for reform, played a major role with succeeded brief indicator of community health service.

Key words: antenatal care; maternal health care

Abbreviations and acronyms

AHOTP	Accelerated Health Officer's training program
BoPED	Regional Bureaus for Planning and Economic development
CSCBP	Civil Society Capacity Building Program
CSO	Civil Society Organization
DPPB	Disaster prevention and preparedness bureau

EDHS	Ethiopian Demographic and health survey
ESO	Emergency Surgical Officer
FMoH	Federal Ministry of Health
HEP	Health Extension Program
HEW	Health extension Worker
HSDP	Health Sector Development Program
HSF	Health Service Frastructure
HSF	Health Sector Reform
ICPD	International Conference on Population and Development
MCH	Mother and Child Health
MMR	Maternal Mortality Rate
MoFED	Ministry of Finance and Economic Development
NCBP	National Capacity Building Program
NGO	Non- Government Organization
PHC	Primary Health Care
rHBS	Regional Health Bureau
SPDRP	Sustainable development and poverty reduction program
USAID	United States Agency International Development
WHO	World Health Organization

Introduction

1.1. Health system decentralization

Decentralization is a complex process, but it can be described as the transfer of power or authority over decision-making from higher (e.g. central, federal, or national) to lower levels (e.g. state, regional, cantonal, district, provincial, municipal, or local) of administration [1-3]. It has been emphasized in many countries typically with an overall aim to improve health system performance.

Emerging in the wake of the 1978 Primary Health Care (PHC) conference at Alma Ata, decentralization of the health sector is by no means a new concept [4]. Alma Ata endorsed PHC as the mechanism for achieving better health, underpinned by principles of equity, community participation and intersectoral collaboration [5]. Decentralization and the PHC approach thus became closely associated as they shared these principles. Decentralization was viewed as a means for achieving PHC goals. Interest in health sector decentralization was renewed in the 1990s when it was identified as a key health reform strategy in the World Bank's World Development Report 1993: Investing in Health [6]. Decentralization has been a key strategy within health sector reform (HSR) policies of many countries[7, 8, 9], and has been seen as a means to improve efficiency, effectiveness and equity in the health sector. As of 2004, there were decentralization projects in the health sector supported by the World Bank in at least 47 developing countries [10]. The Program of Action of the International Conference on Population and Development (ICPD POA) in 1994 also highlighted the role of decentralization. The POA recommended that governments promote community participation in reproductive health services by decentralizing the management of health programs [11]. Sexual and reproductive health advocates viewed decentralization as a vehicle for enhancing access, community participation and empowerment of communities [12, 13].

In recent years sexual and reproductive health advocates have increasingly asserted that HSR initiatives, including decentralization, undermine the ability of health systems in developing countries to deliver on ICPD goals [14, 15, 16]. Different types of decentralization include fiscal decentralization (the transfer of financial resources in the form of grants and tax raising powers to sub-national units of government); administrative decentralization (the functions of central government are shifted to geographically distinct administrative units); and political decentralization (where powers and responsibilities are devolved to elected sub-national governments). The spending autonomy concept encompasses some facet of all these types of decentralization, but mainly focuses on administrative decentralization.

Fundamentally, decentralization reform changes the way health services are delivered [13], including sexual and reproductive health care. The critical challenge in a decentralized health system lies in achieving a careful balance of power between central and local levels in decision-making, priority setting and resource allocation, to ensure that decisions favor, or at the very least do not negatively impact on, availability and equitable access to health services, including sexual and reproductive health services.

Over the past 40 years, in both developed and developing countries, health system organization has undergone a decentralization process from the national to regional and local levels, introducing a multi-level governance structure [17-21]. The main aims of the devolution reforms have been two-fold: to increase efficiency and to improve the financial responsiveness of decentralized authorities [18, 22, 23].

1.2. Main modalities of health sector decentralization

Decentralization of health services is undertaken with the assumption that it will improve health service delivery. One assumption is that local communities have better knowledge of local needs and conditions and can make better decisions if they are granted the authority to manage resources and organize and supply health services. Deconcentration is transfer of authority and responsibility from central agencies to field offices of those agencies at a variety of levels regional, provincial, state, and/or local. Delegation, transfer of authority and responsibility from central agencies to organizations not directly under the control of those agencies. In the health sector this typically include semi-autonomous entities such as health boards, hospitals as well as arrangements whereby non-governmental organizations undertake certain service provisions on behalf of the central government (such as implementation of primary health care campaigns).

Devolution whereby authority, responsibility and resources are transferred from central government agencies to local governments. Local governments will have multiple functions, legislative and revenue raising powers and be responsible to a locally elected council. Privatization involves the transfers of government functions to voluntary organizations or to private profit making or non-profit making enterprises. Many developing countries have for long depended on voluntary organizations typically religious organizations-to provide a substantive part of what otherwise is considered as public health services. The interplay between the private sector and public sector is in most countries a key factor for successful health service delivery that also needs to be considered in design of a possible decentralization program of public health services.

1.3. Health sector reform

Reform means positive change. But health sector reform implies more than just any improvement in health or health care. In 1995 DDM advanced a definition of health sector reform as "sustained, purposeful and fundamental change" – "sustained" in the sense that it is not a "one shot" temporary effort that will not have enduring impacts; "purposeful" in the sense of emerging from a rational, planned and evidence-based process; and "fundamental" in the sense of addressing significant, strategic dimensions of health systems [24]. Clearly health sector reform can include a wide range of action on health systems.

Secondly, the reform should be "purposeful." This means that the elements and components of the reform need to have been developed in a rational manner: identifying clearly the problems of the health

systems evidence-based and linking the mechanisms of system change to solving those problems. A clearly articulated policy of health reform is required so that major actors responsible for implementing the change can specify goals and objectives, acknowledge the relationship of their activities to achieving the goals of reform, and the purposeful linkage among different components of system change.

Third, the reform should be "sustainable." Most fundamental changes will be sustained because they involve significant transformation of systems and the creation of actors who will defend their new interests in the political process. However, reforms that are passed by legislation and not implemented would not qualify; nor would failed reform efforts that are later reversed. For instance, the ambitious "managed competition" reforms of the Netherlands were not sustainable-they were never fully implemented and the reform laws were amended to remove most of the anticipated system changes. We can certainly learn lessons from aborted or unsustainable reform efforts, but they are not complete examples of health sector reform.

It is important to distinguish purposeful health reform from changes in the health sector that are imposed by reforms from outside the sector. This distinction allows us to evaluate health reforms on their own terms as purposeful means of achieving articulated goals. The use of the term "health sector reform" in many settings and by many actors with different motivations accounts for some of the negative experiences with health system change. Changes imposed by broad governmental initiatives, often with international donor support, usually do not have the explicit goal of improving the health system. Rather, they seek to achieve non-health goals such as macroeconomic stability or more democratic political systems. Changes of this type may or may not produce improvements in health systems or in health. They were often not designed explicitly to do so. We should be cautious in calling such changes "health sector reform," since they may tell us little about purposeful programs of health system change. They may nonetheless have important impacts.

Literature review

2.1. Reviews of global health reform & decentralization experiences

In the states emerging from communist rule such as the states of the former Soviet Union and eastern Europe or those still retaining communist party government, but having opened up their economies to the world (i.e., the People's Republic of China and Viet Nam) I find that, structural and economic changes imposed by market reforms have had an impact, usually negative, on the health sector. In China, the economic changes that began in 1978 [25] rapidly dismantled the socialized mechanism for financing health care. The result was a sudden introduction of market forces into what had been a state-organized system. Primary level services lost their collective funding base in much of rural China. State budgets were inadequate to support urban hospitals. These changes unleashed a variety of subsequent changes such as privatization of village doctor practices, introduction of financial autonomy for hospitals, and cost escalation as prices were liberalized and providers were free to try to increase revenues. Health sector change in China has largely been in response to these economic reforms [26]. To date, the state has given little priority to a purposeful health sector reform, although there are indications that there is interest now in using this period of change and experimentation in some provinces and cities to develop a more coherent national strategy. The second type of health system change imposed from outside resulted from the reform of the state and decentralization, which was particularly apparent in many Latin American countries. In the late 1980s and early 1990s, Latin America was inundated by a wave of interest in reform of the state as a response to the financial "debt" crisis of the 1980s and an interest in restoring democracy after decades of military rule in many countries [27]. In Bolivia, for example, the new government of President Sanchez Lozada assumed power in 1993. Reform of the state there took the form of reduction of state budgets and substantial decentralization of government functions to the municipalities. The government's health care functions were included in this decentralization program, but *not* as an intentional program of health sector reform. This reform initially resulted in reduced funding for health facilities, until a specific "small R" health reform directed municipalities to assign an earmarked portion of their funding to health [28].

Decentralization reforms also occurred in other continents and the experience of Senegal is particularly instructive. In Senegal, after years of efforts to decentralize to district health offices within the health sector, the government imposed a radical decentralization to local municipalities with no guidance on how to fund and operate the health system. This led to widespread breakdown of the health system and almost no communication between health officials and newly empowered mayors [29]. In both Bolivia and Senegal, health system managers and international organizations have tried to make a virtue out of necessity by investing in health systems improvements under the newly decentralized state. But that is a far cry from a purposeful policy of decentralization designed specifically to improve health systems. Chile's health reforms began in the early 1980s and were among the first of the current wave of health reforms. (The prior wave was the establishment of major national health systems in many developing countries in the 1950s and 1960s.) The Chilean system created private insurance plans and decentralized its primary care system [30] involves creating a significant private insurance system funded largely through social insurance contributions; decentralization of primary care facilities to municipal governments; changes in payments mechanisms involving first fee-for-service, then per capita payments. The Colombian reforms of 1993 also covered all of the "control knobs" in an innovative social insurance scheme that allowed "managed competition" among public and private health insurance plans and contracting with public and private providers [31]. The Zambian reforms initiated in 1991-92, and elaborated in subsequent years, included an innovative institutional restructuring of government health care by creating a Central Board of Health to oversee health care delivery matters external to the Ministry of Health. It also involved significant decentralization to district health management teams and health boards, the introduction of user-fees, and the development of a nationally defined benefits package [32]. The Central and Eastern European nations also instituted a variety of fundamental reforms of the Soviet style systems that had been imposed on them. The Czech Republic reforms in the early 1990s involved rapid privatization of state-owned services, the creation of multiple state-linked and private health insurance funds, and the introduction new payments mechanisms and regulatory organization. And, in Hungary, less ambitious reforms involved more modest privatization of primary care, introduction of a centralized social insurance system, and decentralization of ownership to the municipal level. While Poland experimented with decentralization, the creation of hospital and clinic autonomy and some pilots of privatization of primary care providers in selected regions and cities, it was not until it passed a health insurance act in 1997 that fundamental change was initiated [33].

2.2. Review of developing country's health reform & decentralization experiences

Developing countries in Africa and elsewhere face severe challenges in improving health sector performance. The challenges are connected to access, efficiency and quality calling for system reforms in the macro-organization, distribution and financing [34]. Since the World Health Organization (WHO) proposed decentralization as a way to empower communities to take ownership and control of their own health in 1978 [35], the strategy has been variously pursued in both developed and developing countries as a key management approach on the belief that it enhances efficiency in public sector performance [36]. Based on such

assumptions, decentralization has been strongly promoted in developing countries [37] although largely without systematic empirical evidence as to its efficacy in improving health outcomes [38]. A number of studies have shown little success of decentralization in attaining its defined goals or the overall health objectives in countries such as Zambia and Uganda [39], in causing disparities in service delivery in some East Asia countries [40] and in worsening macro-economic instability in Latin America [41].

Research on decentralization in Ethiopia is scanty. In the most extensive survey on fiscal, political and administrative decentralization in some 30 African countries [42] found uneven progress across the continent. Furthermore, on all the measures these countries lag far behind developed as well as developing countries in Asia and Latin America. Computed on the basis of the country having direct elections and participation in such elections, the study found that Ethiopia and Kenya scored equally among the most politically decentralized countries in the sub- continent. Using an index measuring clarity of legal framework defining roles and responsibilities for the different levels of government as well as the extent of delegation, the two countries score moderately for administrative decentralization. On the third measure of fiscal decentralization, Ndegwa used the existence of an established formula for transfers and proportion of the public expenditures at the local level and found Kenya to be more moderately decentralized than Ethiopia where local government controls 3% of expenditures and 1.5%, respectively.

Many analysis of literatures reviewed reveals that health care reform efforts in Africa have limited implications on the overall health system improvements, which was mainly due to minimum commitments the countries had exerted in the implementation of the reforms. The effects of the reforms were shown to be highly influenced by political principles and the unique health concerns of each country. Other studies in Ethiopia find the level of local government control of resources much higher (above 20%) [43] and a much deepened administrative decentralization at regional and woreda (district) level [44, 45]. In another assessment of fiscal decentralization, [46] finds that regional governments are receiving higher transfers for recurrent health spending while at the same time increasing their revenue generation.

2.3. Reviews of health reform and decentralization in Ethiopia

Ethiopia is one of the least developed countries in the world with low development indicators even by sub-Saharan Africa standards. 85% of the country's population of 70 million lives in the rural areas, 44% living below the national poverty line (Federal Democratic Republic of Ethiopia [47]. National average health coverage is 64% but utilization per capita is only 0.36 [48]. Following over 20 years of dictatorship under the Dergue regime, in the early 1990s a new democratic government took power and set a new environment for health policy. The new Constitution set a federal system of government comprising nine autonomous largely ethnically distinct regions and two administrative councils, which were further sub-divided into sixty two zones and 523 woredas (districts) [49]. In 1993 the government published the first health policy in 50 years setting the vision for developing the healthcare sector for the next 20 years [50]. Some of the aspects of this policy focus on radical reforms in the system including decentralization, expanding the primary health care system, and encouraging partnerships and the participation of private and NGO actors.

To translate the policy for implementation the first Health Sector Development Program (HSDP-I) was launched in 1997/98. In addition, a healthcare and financing strategy was developed in the same year. Covering the first five years (1997/98–2001/02), HSDP-I put disease prevention at the centre of the sector development. The policy aimed at reorganizing the health services delivery system under decentralization. By and large, the targets set in HSDP-I were not met and a modified HSDP-II (2002/03 – 2004/05) was developed with the inclusion of NGOs in the implementation of the health package. Ethiopia is now in its third HSDP-III developed in 2005 to cover the years 2005/06- 2009/10. HSDP-III stresses the strategic role of NGOs as partners in both planning and implementing healthcare delivery especially at district level and also emphasizes the need to strengthen government-NGOs collaboration (51). Decentralization and collaboration with NGOs were also strongly emphasized in the country's poverty and social economic development framework the Sustainable Development and Poverty Reduction Program (SPDRP) in 2002.

The healthcare system in Ethiopia is characterized by some of the lowest health expenditures and poor health indicators by regional and world standards. In coverage, the healthcare system reaches only about 61 % of the population according to the Health and Health Related Indicators (2002/03) [52]. The physician to population ratio of 29,000 is well below the WHO standard of 1:10,000 (reference). Hence, about 40% of the population does not have access to any modern health service facility. At 871 per 100,000 live births, the maternal mortality rate (MMR) is one of the highest in the world. At the same time, infant mortality rate is 96.8 per 1,000 live births, which is higher than the sub-Saharan average of 93/1,000. Decentralization in Ethiopia entails the devolution of administrative powers and responsibilities as well as fiscal devolution up to the woreda level. Fiscal transfers of unconditional federal grants are enshrined in Article 62 of the Ethiopian Constitution. Since fiscal year 1995 block grants have been disbursed using a formula devised by the Federal Ministry of Finance and Economic Development (MOFED). Although the formula has undergone various revisions over the years, the latest being in 2007, it has maintained a core of weighted variables based on population size, level of development and level of revenue generation [49]. A second wave of decentralization initiated in 2002 in the largest four regions (Amhara, Oromiya, Tigray and the SNNP) aimed at enabling woredas to take primary responsibility for the delivery of basic services with block grants being given directly to woredas starting June. The highly decentralized system enables planning to occur institutionally at every administrative level with broad participation of citizens directly and through electoral representation [45]. The health system of the Federal Democratic Republic of Ethiopia is guided by a 20-year health sector development strategy, which is implemented through a series of five-year health sector development programs (HSDP). The consecutive HSDPs are aligned with international commitments, such as the millennium development goals and national plans such as the Plan for Accelerated and Sustained Development to End Poverty (2005/06-2009/10), and the Growth and Transformation Plan (2010/11-2014/15). Currently, the country is implementing the fourth health sector development plan (HSDP IV).

2.3.1. Health care financing reform and decentralization in Ethiopian health sector

The rapid expansion of the private-for-profit and nongovernmental organization (NGO) sectors is playing a significant role in expanding health service coverage and utilization of the Ethiopian Health care System, thus enhancing the public/private/NGO partnerships in the delivery of health care services in the country.

Offices at different levels of the health sector, from the Federal Ministry of Health (FMoH) to rHBs and woreda health offices, share decision-making processes, powers, and duties where FMoH and the rHBs focus more on policy matters and technical support while woreda health offices focus on managing and coordinating the operation of a district health system that includes a primary hospital, health centers, and health posts under the woreda's jurisdiction. Regions and districts have rHBs and district health offices to manage public health services at their levels. The devolution of power to regional governments has resulted in a shift of public service delivery, including health care, largely under the authority of the regions. The decentralized structure of government requires that project implementation by NGOs is vetted through the government bureaucratic machinery. NGOs must sign tripartite agreements with the regional Disaster Prevention and Preparedness Bureaus (DPPBs) (an inter-ministerial agency), the regional Bureaus of Planning and Economic Development (BoPEDs) under the Ministry of Finance and Economic Development, and the Regional Health Bureaus (RHBs) under

the Federal Ministry of Health to outline project modalities and responsibilities for the signatories [53]. The DPPB/BoPED and RHBs are responsible for appraising project documents before project approval and also to monitor on-going projects. NGOs are required to submit quarterly progress reports during project implementation to the DPPB/BoPED, zonal and woreda health offices. Mid-term and end-of-project evaluations are mandated to be jointly undertaken by a team comprising representatives from the NGO, DPPB, and RHBs.

Decentralization in Ethiopia has opened up important avenues for health NGOs to participate in the health sector reform program. At the local district level, the woreda is the central unit coordinating planning, budgeting and implementing programs and projects. The National Capacity Building Program (NCBP) launched by the federal government in 2001 has targeted woreda governments to strengthen their implementation of block grants which have been awarded directly to them since 2002. Following publication of the NCBP, the Ministry of Capacity Building, established to oversee this program, developed a consultative document for the involvement of civil society organizations (CSOs) in the government's poverty reduction program [54]. NGOs and the myriad of CSOs are mandated to participate in the three pillars established under these programs, namely, democratization, delivery of services, and decentralization. The Civil Society Capacity Building Program (CSCBP), as it was called, aimed at, among other things, streamlining registration and coordination, increasing resources for CSOs, enhancing engagement with government, establish a Civil Society Capacity Building Partnership Fund, and building CSOs capacity for service delivery and engagement with the public.

According to USAID report of 2020 [55], the following health sector financing reform have been recorded in Ethiopia;

Following ratification of the required legal frameworks and adoption of operational guides, health facilities (hospitals and health centers) in Amhara, Oromia, and SnnP regional States were able to retain and use their internally generated revenue as additive to their regular government budget. In the last two to three years, all the remaining regions approved the legal and operational frameworks and introduced retention with the exception of Somali and afar regions. These regions are still in the process of approving legal frameworks and adoption of operational guides. In the regions that are already implementing the reform, only the new health centers have not yet started retention as they need to complete necessary planning, which includes recruiting finance management staff. The health facility-level retained revenue is being used for quality improvement, as defined in the respective legal and operational frameworks of the regions.

In 2009/10, data collected from Amhara, Oromia, and SnnP regional States through supportive supervision showed that out of 299 health centers, nearly 84.6 percent [253] have had an appropriated budget for EFy 2009/10.The average amount of appropriated budget for the health centers from the retained revenue in EFy 2009/10 was 208,930.00 Ethiopian Birr (ETB). Health centers utilized nearly 73 percent of their appropriated budget from their retained revenue per quarter. only 17 hospitals (81 percent) provided data on the total amount in their appropriated budget for the same fiscal year.

The average annual appropriated budget per hospital was 1,647,821.08 ETB. Although the amount varies from health facility to health facility, generally the retained amount is large enough to contribute to improving the quality of health services in health facilities. In the Amhara region, where the new fee waiver system is fully implemented, an increasing number of poor households experienced better access to health services. A total of 1,319,114 indigents were selected through community participation and benefited from free health care services. The average number of fee waiver beneficiaries was 7,946 and the government budget allocation for waiver reimbursement per district was 20,791 ETB. Some of the federal and regional hospitals established private wings to generate additional income for health professionals and health facilities. The private wings offer more choices to users while also addressing improvements in health worker retention and income generation for the facilities.

Health centers and hospitals in health care finance reform starter regions established governing bodies, and regions where reforms are being expanded are following the same steps. Governance is one of the six building blocks of countries' health systems [56]. HSFr project's supportive supervision synthesis report revealed that out of 320 health facilities visited in Amhara, Oromia, and SnnP regions, 96.3 percent [288] of health centers and all 21 hospitals established a health facility governing body/board at the time of supervision visits in 2009/10. Only 3.5 percent (10) of health centers in the SnnP reported that they had not yet established a governing body. of those that established a governing body/board, nearly 83 percent (269 health facilities) indicated the frequency of governing body/board meetings as well as procedures followed such as recording minutes. Facilities listed major health care finance-related decisions made by the governing body/board. These included approval of the health facility work plan and budget utilization of retained revenue, use of retained revenue for procurement of drugs and medical supplies, evaluation of the overall performance of the health facility, and oversight of the implementation of the new fee-waiver system. This coincides perfectly with their duties and responsibilities in the legal framework.

Practice of Outsourcing of nonclinical services in public hospitals, to improve efficiency, reduce costs, and enable health facilities to focus on their core clinical services. The HSFr project 2009/10 supervision report showed that among all hospitals covered during supportive supervision, three hospitals in amhara region – Enat, debre Birhan, and Felege Hiwot – outsourced nonclinical services such as supply of food items (bread, injera, and wat [stew]).

The health care financing policy of the government promotes cost sharing between the government and users as one of the key principles of the health care financing strategy. The regional laws vary in terms of mandating the user fee revision and setting. For instance, in Amhara and Oromia, this mandate is given to the regional government, while SnnP health facilities are given the responsibility of setting and revising user fees taking into consideration the community's willingness and ability to pay as well as cost of services. However, a recent user fee revision study conducted by the HSFr project showed that there are discrepancies in adherence of regional legislation. For instance, in Amhara region, although the regional law gave the mandate of user fee revision to the regional council, of the 12 health centers and six hospitals covered in the study, nine health centers and four hospitals revised user fees on their own.

2.3.2. Human resource reform in Ethiopian health sector reform

The health sector in Ethiopia has shown remarkable progress involving a number of health, nutrition, and population indicators over the last decade. The country achieved the targets of the millennium development goal on child health well ahead of time [57]. The 2011 Ethiopian demographic and health survey (DHS) reported that infant mortality declined by 42% and under-five mortality by 47% over the15-year period preceding the survey. There has been a major expansion of primary healthcare units in the last two decades through rehabilitation and upgrading of existing facilities and construction of new facilities. The number of health centers has increased almost fivefold and the number of health posts has more than doubled [58]. While we appreciate reforms achieved through human resource, the health reform and improved community health status through the program so called Health Extension program (HEP) is never undermined.

a) Health Extension Program (HEP)

The large gap in access to health services between urban and rural populations was a major motivating factor for launching the health extension program (HEP) and the creation of a new cadre of salaried

community health extension workers. The clinical curative health services provided in Ethiopia neglected the needs of more than 80% of the population living in rural areas. They were also poorly aligned with national health priorities. More than 75% of the disease burden in the country was related to preventable and communicable diseases. An analysis of investment and recurrent costs, as well as of the epidemiological situation in the country, led to the conclusion that most healthcare needs of the rural population could only be met through the expansion of primary healthcare facilities [59, 60]. The main agenda of this program was to promote communities' ability to improve their own health services. The program established community health services that aimed to improve access to high-impact preventive and basic curative care, especially for people living in rural areas [61]. The Government's goal was to provide two salaried community health workers for each village. The targeted density of coverage was an average of two HEWs for each population of 5000 people.

HEP was having 3 components under which 16 packages were included to be implemented. These components were: Hygiene and Environmental Sanitation; which includes Excreta disposal Solid and liquid waste management, Water supply safety, Food hygiene and safety, Healthy home environment, Arthropod and rodent control and Personal hygiene. Disease Prevention and Control under which, Prevention and control of HIV and other STIs, Tuberculosis prevention and control, Malaria prevention and control and First aid are included. Family Health Services included Maternal and child health, Family planning, Immunization, Adolescent and reproductive health and Nutrition.

By the end of 2012, a total of 35 347 health extension workers had been trained and deployed, surpassing the community-level service component of the HSDP III target for ensuring universal coverage [62]. Since 2010, the HEW training has focused more on upgrading skills and career development for existing HEWs, rather than training new ones. Training new HEWs, however, still continues for pastoralist and urban areas. Compared to 2000-2004, health indicators during the period following the introduction of the program (2005-2010) show marked improvements for high-impact interventions such as family planning, antenatal care, maternal health care, and hygiene and sanitation. Similarly, studies which compared areas served with HEP with those not served have shown that the program has positively impacted health determinants. For instance, there is improved knowledge and use in HEP areas compared to non-HEP areas in improved sanitation (75.6% and 36.3%, respectively), proper human waste disposal (57.6% and 34%) and hand washing facilities present (55.7% and 39.9%). A recent study by the World Bank documented that pregnant women in the poorest rural households were 15% more likely to receive antenatal care and 12% more likely to vaccinate their child against measles if they had received a visit from an HEW than if they had not [63, 64].

b) Task-shifting and scaling-up of mid-level health professionals

Task-shifting is defined as delegating tasks to existing or new cadres who receive either less training or narrowly tailored training [65]. It may take various forms – including substituting tasks among professionals; delegating tasks to professionals with less training; creating new professional or paraprofessional cadres, whereby tasks are shifted from workers with more general training to workers with specific training for a particular task; or a combination of these. The accelerated expansion of primary healthcare units and the general commitment to bring health services closer to communities fuelled a major demand for human resources in Ethiopia [60, 66]. It aimed to shift some of the tasks and functions of generalist and specialist physicians to two cadres of mid-level health professionals: health officers and emergency surgical officers (ESO). The Government of Ethiopia therefore launched the accelerated health officers' training program (AHOTP) with the objective of training and deploying them to provide and lead primary healthcare services in health centers and primary hospitals. Through the AHOTP, more than 3573 health officers had been trained and deployed by the end of 2010 [62].

c) Utilization of non-teaching hospitals as training centers: health officers and emergency surgical officers

Shifting tasks from physicians to non-physician clinicians such as health officers and emergency surgical officers required a major increase in training capacity. There was limited capacity in universities and colleges to scale up the production of health professionals. The expansion of this capacity under the AHOTP was achieved through the utilization of non-teaching hospitals as training centers. This approach was later expanded to the training of other cadres. The universities and colleges, on the other hand, had insufficient clinical faculty members and practical training sites to expand their enrolment. To fill this gap, twenty non-teaching hospitals were linked with five nearby universities. This has strengthened collaboration between the health and education sectors in the production of health workers. The increased training output translated into remarkable progress in the deployment of health officers, improving their ratio to population from 1:63 785 in 2007–8 to 1:17 128 in 2012

The training program for emergency surgical officers followed the same model. Implementation was begun by universities that had already gained experience in training of health officers, and was rapidly scaled up to 11 colleges and universities and 34 affiliate hospitals in just five years. As of June 2013, a total of 536 officers were enrolled in the program and a total of 136 emergency surgical officers had graduated and been deployed across the country [67]. The ESO training program has also improved access to emergency obstetric services in rural communities, as indicated by a recent report on the volume and type of surgical interventions conducted by ESOs and the context in which task-shifting was implemented.

d) Training mid-level professionals with nurse-level entry

In 2009, Ethiopia had only 1379 midwives, falling far short of the target of deploying two midwives to each of the 3516 health centers planned to be established by 2015 [62]. Capitalizing on the availability of a relatively large number of nurses in the labor market, the Government launched an accelerated midwifery training program in 15 regional health science colleges, targeting nurses as training candidates. In the subsequent three years, 3200 nurses graduated from the midwifery training program and were deployed nationwide and the midwife to population ratio decreased from 1:60 965 in 2007-2008 to 1:21 866 in 2011-2012 [68]. The increased availability of midwives has translated into an improved institutional delivery rate. For example, according to a recent report [69] which compared the institutional delivery rate before and after the deployment of midwives at selected health centers, institutional deliveries have markedly risen after the deployment of midwives with an increase of over 60%. In parallel, a training program for nurse-anesthetists was launched in 11 regional health science colleges.

e) Focus on mid-level health professionals

The focus on mid-level health professionals such as health officers, emergency surgical officers, midwives, and nurse-anesthetists has improved the distribution of human resources for health across the regions. The retention of these cadres in rural posts appears to be better than for medical doctors, although there are no published studies to confirm this.

Local recruitment is reform indicators where government imposed the facilitating the rural pipeline, creating regional quotas for applicants from disadvantaged regions as long as they met entry requirements.

Methods and Materials

This study is conducted using four purposely selected reports and articles as a source. Among various health sector reform and decentralization activities, this study focused on the two main reforms activities that have been achieved through health sector decentralization in Ethiopia;

Financial health sector reform and human resource health sector reform in Ethiopia. Because the rest health sector reforms are included under these two main reform activities. For analysis the sources were divided in to two parts. The first part analysis was undertaken using USAID report for Ethiopia, Health Care Financing Reform in Ethiopia: Improving Quality and Equity to get data of health sector reforms achieved toward financing in Ethiopian health sector [55]. The second part of analysis was undertaken using Meta-analysis study, Community health extension program of Ethiopia, 2003-2018: successes and challenges toward universal coverage for primary healthcare services [70] and WHO report for Ethiopia, improving health system efficiency [71] and Study conducted on Ethiopia and Kenya, by Harvard university; titled Reforming health systems: the role of NGOs in Decentralization – lessons from Kenya and Ethiopia [72]. To intensify evidences of this study, additional Federal ministry of health annual reports and other documents were used to get sufficient data for human resource reform and financial reform in health sector of Ethiopia. The reason why annual reports, meta-analysis study and WHO report were selected was to get actual and reliable data. After important information was extracted and generalized from these documents, vital points of reforms achieved in the past three decades were summarized at the last literature of this study. Overall parts of this study was accomplished between May 11, 2020- May 30, 2020.

Summary and Lessons from Ethiopian health sector decentralization and reform

Decentralization in the health system is transfer of power, authority and decision making for public health care facility. In actual decentralization, the maximum reform with beneficiary and expected community health can be attained in everywhere. However, though health system decentralization is a major key for optimizing and implementing community health policy in advance, specially in a developing country where health system is going parallel with political desire, politics of a country plays a huge role in implementing health sector decentralization policy.

Ethiopia, using three tier health system are showing dramatically reform in health sector after more setup were adjusted and facilitated for health system decentralization. Current Ethiopian health system reform can be summarized in two broader means which high reforms and transformation were achieved through. In health care financing evolution, marvelous reforms and changes have been recorded. Least of these reforms are: Establishment of a private wing in public hospitals, which have been providing alternatives and choices of private health service users, and generating additional income for health facilities, Health facility-based revenue retention and utilization, which most regions are using as the additional source of income to facilitate health service and infrastructure increase their community satisfaction in getting quality health care. Major indicators of health facility based revenue retention and retention is availability of essential medicines increased, Continual quality of care maintained, Water supply and electricity to health facilities improved, Diagnostic capacity of health facilities improved, Operational costs including paying utility bills covered and Health infrastructure improved.

Systematizing fee waiver and exemption systems is another achieved financial reform. Intensifying Health facility autonomy through establishment of governing bodies strategy increased management role in country's health system as governance one one of the six building blocks of health service. To improve efficiency, reduce costs, and enable health facilities to focus on their core clinical services, outsourcing of nonclinical services such as food, in public hospitals was also successfully achieved financial reform activities.

Another health sector reform through which changes and transformation was achieved is human resource reform by which numerous trained low level health workers were participated in the community to improve community health status. The evaluation of the first five-year health sector development program triggered the introduction of major human resource reforms. At the end of the program in 2003, the overall performance of the health sector had improved, but there were major gaps in the delivery of essential services in rural areas. To handle these gaps, the program so called health extension program (HEP) was launched by the creation of a new cadre of salaried community health extension workers. Basically it was formulated with three components under which 16 health extension packages were generalized. In almost one decade, it accomplished with the fabulous change specially on mother-and-child health (MCH) program.

Task-shifting and scaling-up of mid-level health professionals, where previously existing health professionals were developed their carrier toward the maximum proficiency healthcare with the advanced materials with less training preparation have been maintaining health status of the community till now. Utilization of non-teaching hospitals as training centres: health officers and emergency surgical officers increased health officers and other health workers per population ratio. Focus on mid-level health professionals to reserve these cadres in rural posts appeared to be a vital. Another reforms attained changes are: Local recruitment where government imposed the facilitating the rural pipeline, creating regional quotas for applicants from disadvantaged regions as long as they met entry requirements, efficiency gains through optimizing the mix of skills that provided logical positive outcome because the expenditures necessary for training high level care provider is always less than of training to specialize the existing one. This approach generates efficiency gains in terms of overall training costs and the wage bill.

Besides, the following lessons are learnt from Ethiopian human resource health sector:

Defining and prioritizing the staff categories to be scaled up in a reform of human resources for health contributes to increasing the effectiveness and efficiency of the health sector. Social, epidemiological, geographical, and economic context of the country, as well as the evidence for high-impact interventions in health have to be taken into consideration. Carefully planned and timed supply-side measures in human resources and focusing on conventional and alternative cadres of mid-level health workers, have a great potential for improving the density, distribution, and performance of health workers, as well as the cost of delivering health services. The supply of health workers can be increased significantly in a relatively short time if there is sufficient political and managerial will.

Salaried community-based health extension workers provide cost-effective interventions, ensure that supplies (such as vaccines) are used appropriately, and work in areas and among communities with a high need for services, task-shifting (for example, from doctors to health officers) can increase technical and allocative efficiency by providing priority interventions at a lower cost in areas of need. The appropriateness of the training infrastructure and the availability of skilled and motivated trainers must be assured, enabling factors for the realization of efficiency gains through human resource reforms include regular follow-up of the reform by top management, strong monitoring and coordination mechanisms for training and deployment, the inclusion of relevant stakeholders, and alignment of funding by government and development partners with agreed priorities. Although efficiency gains in terms of an improved staff mix, a decreased wage bill and improved geographical distribution of health workers can be ascertained early, assessing the impact in terms of increased utilization of services and improved health outcomes requires further studies, quantification of the efficiency gains achieved through human resource reforms is difficult. There remains a need to develop guidelines and standardized methodological tools.

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