ETHIOPIAN PUBLIC HEALTH ASSOCIATION

Reflections on the Contemporary health system of Ethiopia and thoughts for improvement

Five papers on selected health care themes

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EDITORIAL

By Yayehyirad Kitaw; MD/ MPH

"The health care delivery system is in need of fundamental change. Many patients, doctors, nurses, and health care leaders are concerned that the care delivered is not, essentially, the care we should receive…Quality problems are everywhere, affecting many patients" (1). If you think this is about Ethiopia, think again, it is about the USA. An illustration of the fact that "Health systems and delivery of care across all countries have been challenged by the rise of non-communicable diseases, shortage of the health workforce, aging population, unplanned emergencies and infectious disease outbreaks" (2) leading to shift in focus from curative care to health promotion and disease prevention (3).

These major shifts are occurring in the context of a dynamic, rapidly evolving global/international situation with major challenges and opportunities, including:

Demographic changes worldwide (2) with "*Ethiopia - a demographic giant at the brink of its fertility transition"* (4) poised to reap the benefit from a demographic dividend (5)

Globalization - with its conflicting aims (6), one of the key challenges facing health policy-makers and public health practitioners (7,8)

The technological/post-industrial revolution, the digital revolution in particular which is revolutionizing not only information/data processing1 but the whole healthcare function (9-13). Even though "there are nearly endless opportunities to leverage technology to deploy more precise, efficient, and impactful interventions at exactly the right moment in a patient care" (14), digital transformation of health care, a social determinant of health (15), can be disruptive unless managed appropriately (2, 16, 17). Ethiopia is endeavoring to use ICT's tremendous opportunities to improve the efficiency and quality of health care (18) and the government considers ICT development as a strategic priority as exemplified in the development of ICT Policy (2009) and the prominence given to it in the second Growth and Transformation Plan (GTPII) (19-21). However, as pointed out by Bishaw (22) improved and constant attention is required.

Climate change "arguably … one of the greatest global health threats …and opportunities of our time" (23) including, in particular, its impact on vector-borne diseases, such as malaria and dengue fever (24), threatens to disrupt many aspects of development including health (25). Proactive measures (26), including reducing the 'carbon footprint of healthcare' (27) are required.

Natural/manmade crisis/disasters related to "pandemics/epidemics …, climate change, urbanization, biodiversity loss and financial instability have been identified as the most critical global issues today" (28). Even though laudable efforts have been made globally (28,29) and in Ethiopia (30), recent events, COVID-19 in particular, have shown that no country is prepared enough for major emergencies (31,32).

In Ethiopia, this has to be undertaken in the context of complex socio-economic and political challenges, "constants in Ethiopian history" - very large country (>1m km²); diverse & difficult topography; conflict ridden regime transitions2; poor transportation & communication (telephone 4%); large, ethnically diverse and young population, the majority

[1] "Whereas it took 1,800 years for the amount of knowledge in the world to double from 100 BCE to 1700 ACE, information is currently doubling every 12 months. Online information doubles every six months; technical knowledge doubles every 18 months" (34)

[2] Even though writing, presumably, during a major pandemic and some major internal conflicts, the authors do not address the issue of (preparedness for) health emergencies.

with little or no education; low per capita income (33). In this context, Ethiopia's response has been a number of innovative responses including the Gondar Health Training Center, the original alma mater of the current authors, in the early 1950s (35) and the much lauded (3,36) Health Extension Program (HEP).

Ethiopia's healthcare access and quality index (HAQ) increased from 10.6 in 1990 to 28.1 in 2016; at a much faster rate (4.4%), between 2000 and 2016, than most other African countries (38). However, Ethiopia continues to have one of the highest burden of disease 3(BOD) in Africa with still high burden of communicable diseases (nearly 70% of Years of Life Lost) but with non-communicable diseases playing increasing deleterious role implying "that the Ethiopian health system will need to strengthen its horizontal health systems to deal with wide ranging sources of mortality and morbidity across a large and growing population" (3).

This where the contributions by a group of dedicated, highly trained and experienced Ethiopian health professionals fits in handily. Health and, consequently, health systems are central in human affairs "Without health, there is no productivity, no GDP, no trade, and no education" (40). But, health systems are complex and controversial beleaguered with the need "to prioritise resilience and sustainability to overcome the collective challenges of shifting demographics, climate change, and increased demand" (40). It is in this context that this contribution is significant and timely, not to be the final and last word but a thoughtful discussion of opportunities and challenges and breakthrough and bold suggestions/recommendations for the future to promote participatory dialogue in a field fraught with the cacophony of multiple actors and stakeholders.

Thus, each author addresses core issues, challenges and opportunities on selected WHO health system building blocks in Ethiopia including:

Governance and leadership of the health system: Sinnshaw (41) tackles the daunting, but critically important, task of assessing health system governance4 as "A comprehensive assessment of governance could enable policy makers to prioritize solutions for problems identified as well as replicate and scale-up examples of good practice" (42). From the various dimensions of governance (43), he addresses in some detail issues related to citizens' voice and accountability and government effectiveness, including among a large number of pertinent issues:

Inter/multi-sectoral/integrated Sinshaw (41) underscores the importance but challenges to the much required inter-sectoral collaboration in health. This is an enduring and challenging issue globally and has been, in the Ethiopian context, complicated by the adoption of the "Sector-Wide Approach' (33). So, in conjunction with the recommendations of the author, we suggest exploring ways of strengthening existing and other coordination mechanisms such as social norms, judicial system, the market, social media etc. (44) in the Ethiopian context.

Decentralization – the author clearly articulates the problems with the decentralization process in the health sector with problems in plan implementations at various levels related to issues of deployment, competency and very loose accountability, at WeHO level in particular, leading, among others, to inadequate funding and inefficient use of resources. Decentralization, in general (45) and in health care (33) is not new to Ethiopia. We agree that the current decentralization process has, in spite of laudable achievements (46), many problems including the politicization and rapid deployment of the process with little preparation, let alone pilot-testing, in the sector (33). However, the solution should, much in line with the suggestions of Bulto (46), be in fine-tuning the process and developing improved M&E systems using the suggested consultation mechanisms; but not return to the status quo ante. As suggested for the governance of digital transformations of health, in light of the substantial risks and opportunities involved, a precautionary, value-based approach is required (47).

The PHCU approach in the Ethiopian Health Care delivery system As seen above, health systems and delivery of care worldwide, including Ethiopia, are facing major challenges (2,3). Bulto (46) clearly articulates the status, challenges and opportunities and indicates thought provoking reform proposals. While pointing to some notable achievements (increased access, introduction of 'Essential Health Service Package etc.) in line with previous studies (36,37), he identifies related weaknesses (decentralization – what Sinnshaw (41) labels as 'unwarranted delinkages' between the various levels, lack of competency, lack of well-developed and monitored referral system etc.) in the system. He also recommends some remedial undertakings including: establishing/strengthening communication networks including the various steering and consultative committees/forums (48); strengthening management skills; use of new technologies with support from universities – including, presumably, what have been called 'academic

[3] HO trained in PH, medicine and team leadership and hands-on experience PH practice out of the major cities
[4] A relatively new concept in public health (42)

health sciences systems (AHSS)' (49); establishing scientific advisory committees at various levels; improving knowledge and understanding of policies and strategies.

Human Resources for Health (HRH) is one of the most important but challenging and neglected (50) component in the complex health system reform. It is challenging because of, among others, the rapid pace of change in the health care system (51); the large number of stakeholders5 that occupy the HRH policy space (52); and the lack of quality data "to make evidence-based decisions and take action to better deploy, manage, and support their health workforce" (53) as also underscored by Bishaw (22). If need be, the COVID-19 pandemic has, by the disruptions it caused to healthcare workers' practices (54), underscored the importance revisiting HRH policies (55). Bishaw (22) clearly articulates the deficiencies and negative impacts of the "Flooding Strategy" while acknowledging the need for training large number of HWs to meet the SDGs targets but emphasizing the need for meticulous, long term planning. In passing, she raises the vexed issue (56) of what to include in health workforce density metrics. Surprisingly, neither Bishaw (22) nor any of the authors address the gender dimension in health care.

- In **Health Care financing,** G/Egziabher (57), while outlining the initiatives over several decades to mobilize resources, underscores the inadequate6 funding of health care, the high dependence on external/donor funding which tended to be fragmented and often volatile (58) in spite of international declarations to the contrary (59). He also discusses the new initiatives such as CBHI and SHI and efforts to improve the efficiency of the system and points to avenues for future development.
- In **Observations on the pharmaceutical sector practices in Ethiopia,** Shiferaw (60), in line with global consensus (61,62), underscores the central role pharmaceuticals play in achieving UHC. Studies show that, in Ethiopia, 52% and 42% of expenditures in HC and hospitals respectively are for pharmaceutical supplies (63). However, per capita spending in Ethiopia is low and most, 75-85% depending on sources (64-66), of the drugs are imported. Under these circumstances, Shiferaw (60) reasserts the need for focused attention and investment on pharmaceutical supply and supply chain.

Conclusions:

"Societies are complex and dynamic systems shaped by their historical contingencies as well as their contemporary economics, production and consumption activities, power relations, governance, policies, polities (or institutions), legal rules, culture, values, and ecology" (67), all with import for population health. The authors have raised major issues such as inter/multi-sectoral collaboration (almost all); decentralization (Snishaw in particular); quality (HS, HRH…) (almost all but particularly Snishaw for health service, Bishaw for HRH, and Shiferaw for pharmaceuticals); inadequate resources (Financing, HRH…) (almost all).

The authors have clearly indicated that their attempt was not to be exhaustive but to highlight major issues but we would have liked to see explicit but brief discussions of issue related to: Health, in particular HRH, Policy; Social determinants including Diversity, Gender, Harmful Traditional Practices; BOD, HMIS… may be in the next series of papers by them or those inspired by their contributions.

As indicated above, health system reform is a complex undertaking under any circumstances but the more so in Ethiopia that is endeavoring to transition to lower-middle-income status (39) under very challenging internal and external pressures. Thorough analysis and highly participatory discussions with a long term perspective are required. Given the high level of expertise, experience and commitment of the authors, all concerned should take these as very important inputs to the process.

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[5] Ministries of Education, Health, Finance, and Public Service; training institutions (public and private); professional boards and associations; WHO; and international donors…

[6] The authors, except Shiferaw (60) for pharmaceuticals, do not use per capita expenditure which in spite of increases in recent years, remains very low in Ethiopia at $75 at 2019($PPP) compared for example to $13,345 for USA and even $248 for Kenya (68).

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Abbreviations

AAU	Addis Ababa University
AAU/SPH	AAU/School of Public Health
AC	Advisory Council
AFPHA	Africa Federation of Public Health Association
AI	Artificial Intelligence
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
APR	Annual Program Results
BCC	Behaviour Change Communication
CBHI	Community Based Health Insurance
CDC	Centres for Disease Control and Prevention
COP	Country Operational Plan
COVID	Corona Virus Infection Disorder
CSO	Civil Society Organization
EC	Executive Committee
EFDA	Ethiopia Food and drug administration
EMA	Ethiopian Medical Association
EML	Essential Medicines List
EPHA	Ethiopian Public Health Association
EPHI	Ethiopian Public Health Institute
FMHACA	Food, Medicine and Health Care Administration and Control Authority
FMOE	Federal Ministry of Education
FMOH	Federal Ministry of Health
FMOST	Federal Ministry of Science and Technology
GDP	Gross National Product
GMP	Good Manufacturing Practice
G&L	Governance & Leadership
GSI	Global Strategy and Initiatives
HDT	Health Development Team
HC	Health Centre
HMIS	Health Management Information System
FMOH	Federal Ministry of Health
FMOST	Federal Ministry of Science and Technology
GDP	Gross National Product
GMP	Good Manufacturing Practice
GSI	Global Strategy and Initiatives
HDT	Health Development Team
HC	Health Centre
HMIS	Health Management Information System
HIV/AIDS	Human Immunodeficiency Virus/Acute Immune Deficiency Syndrome
HO	Health Officer
HP	Health post
HRH	Human Resource for Health
HSDP	Health Sector Development Program
HSS	Health System Strengthening
HSTP	Health Sector Transformation Plan
HW	Health Worker
HEW	Health extension Worker
HWF	Health Work Force
IMCI	Integrated Management of Childhood Illness
IMNCI	Integrated Management of New-born & childhood Illness
M&E	Monitoring and Evaluation

MC	Management Committee
MDGs	Millennium Development goals
MOST	Ministry of Science and Technology
NCD	Non-communicable Diseases
NGO	Non-Governmental Organization
NHA	National Health Account
NMP	National Medicine Policy
PFSA	Pharmaceutical Fund & Supply Agency
PHC	Primary Health Care
PHCU	Primary Health Care Unit
SDG	Sustainable Development Goal
SHI	Social Health Insurance
SPHMMC	Saint Paul hospital millennium medical college
SPH	School of Public Health
UDDM	Use of Data for Decision Making
UHC	Universal Health Coverage
USAID	United States Agency for Int. Development
WHO	World Health Organization
WrHO	Woreda health office
ZHD	Zonal Health Department

Introduction

The five papers originate out of passion & commitment for public health, from likeminded friends in the profession with long careers in the discipline. The writers had successful career paths at national and international levels, with the intention of sharing their inner feelings in public health development, challenges and opportunities in Ethiopia.

The write ups are short of rigor and thus not exhaustive enough study reports, but rather formative reflections and/or observations of the Ethiopian contemporary health system. The objective is to engender discussion and inform further research.

The basis of the project were observations, formal and informal discussions with professionals in the field, review of published and official reports.

The five themes selected are related to the building blocks or inputs to strengthen the health system as recommended by the WHO (WHO 2007). Each paper is written following background, main issues and suggestions for improvement.

Governance and leadership of the health system: It is important to assess and monitor, periodically, how well any system or public sector is performing its stated or perceived roles. The need for assessments could arise from perceived problems, observed deficiencies /gaps, unfulfilled / unrealized plans or just as a routine management activity. Health systems "governance" applies to establishing how health care provisions and developments of a country are structured and governed at different levels. The "human software" that leads and manages the health system's structures and functions defines its "leadership". Using desk review of relevant documents and observations, this paper attempted to assess the health sector governance and leadership situation in Ethiopia as part of other assessments of the health system being reported in this publication. Some observations highlighted, included issues of decentralization of the HS at subnational levels where policies and plans are not realized on the ground, due to inadequate resources, capacity, weak leadership and accountability challenges. The paper offered suggestions for further review and improvements

The PHCU approach in the Ethiopian health services delivery towards UHC: In this paper the writer explained commitments made by countries of the world to the implementation of primary health care services initially at Alma-Ata in 1978 and recently at Astana in 2018. The appropriateness of the approach for achieving universal health coverage is elaborated by explaining the opportunities that exist in the Ethiopian health service delivery with proven contributions of the health extension program in strengthening preventive and promotive health strategies. Most importantly the paper stressed the need for organizing the frontline health services provided at health posts, health centers and primary hospitals as units to facilitate continuum of care. The Ethiopia PHCU design is relevant for a catchment population, comprehensive service provision, and monitoring for results. The shortfalls in advancing the HEP linkage to the PHCU, included weak leadership and limited financial resources. Recommendations are given on how challenges could be addressed in the implementation of PHCU.

Human resources for health: Ethiopia's persistent shortage of health workers at every level of health care, especially in the rural areas is a serious concern that continues to undermine the country's efforts towards UHC (SDG,2030). Health work force density stands at 1.19 per thousand population that is far below the WHO Sub-Saharan estimated average in relation to SDG. Ensuring the availability of properly trained and equitably distributed health work force is the backbone for responsive health services. The Current low status, limited financial investment on HRH coupled with fast population growth calls for urgent and concerted action to identify and implement evidence-based strategies. While pre-service and CPD trainings are being implemented extensively, efforts to assess post training performances have not been consistently followed up as a means to improve quality. With multiple players in HWF training and deployment, the capacity of the FMOH to guide, coordinate and monitor HRH performance is crucial to streamline stakeholders' efforts for coherent-and effective approaches. Politicization and commercialization of health training schools without ensuring quality and relevance is a national challenge. Consistent with the national goal to achieve universal coverage of health services, Primary Health Care Strategy continues to be the main focus of the sector. In line with that , strengthening the capacity of HWF at the Woreda level deserves emphasis as the nexus between the sector and communities. There is increasing need to balance training initiatives between clinical and public health areas, with emphasis on advancing competencies in governance, management and leadership, which has been shown to be the sector's weakness. The lack or absence of eminent national schools of Public Health to educate, guide,

research and lead in priority public health concerns require action to transform the Health Sector. In addition, refinement of the effectiveness of the decentralization process to enhance performance of the sector, reinforcement of the Woreda Council and the PHCU functionality, engagement of Professionals in the diaspora, communities, and increasing use of technologyare suggested to strengthen the Sector.

Health care financing: Poor health care financing is one of the major challenges of the health system in Ethiopia. Factors contributing to the poor health care financing in the country include: low government spending on the health sector; strong reliance on out-of-pocket expenditure; inefficient and inequitable utilization of resources; and unpredictable donor funding. Health financing in Ethiopia comes from a variety of sources, but out-of-pocket spending accounts for a significant portion. In Ethiopia, around 34% of total health expenditure comes from household out-of-pocket payments. Out-of-pocket payment creates financial barriers to access health services and puts people at risk of impoverishment. Reform options to be considered, include raising the government budget allocation; increasing domestic resource mobilization, expansion of insurance schemes (CBHI & SHI)), improving effectiveness and efficiency of health resources, and mobilizing non-state actors (private, NGOs) in the provision of health services.

Observations on the Ethiopian Pharmaceutical sector: the paper provides an overview of the sector, with focus on the review of procurement & inventory practices; and the availability of essential medicines in the country. Lack of a well-functioning procurement and supply chain management system; underfinancing of the health sector, absence of updated national drugs policy and paucity of timely information are major issues associated with the low availability, stock outs, irrational use and unaffordability of essential medicines in Ethiopia. Furthermore, there is limited or no cost analysis and weak inventory control management prevails. The availability of essential medicines in public health facilities' is less than 50%. Due to increasing prevalence of NCDs and injuries, the demand for medicines and related products is markedly on the rise owing to the long-term care for such conditions.

Access to essential medicines is largely contingent upon a well-functioning supply chain system that moves drugs from the manufacturer through to end use. Supply chain management for medicines and related products in the health system has received increasing attention in recent years. In the recent years, there has been relative increase in financing for health, with much of this new funding earmarked for preventing priority diseases, with some attention to the health system strengthening, PFSA/MOH, now in charge of delivering a larger number and volume of products. Despite institutional arrangements, and progressively increasing investments in procurement of essential medicines & products, their availability at health facilities remains chronically inadequate. On the supply side, the growing number of local manufacturers need to be motivated to comply with GMP requirements through proper certification. The need to revise the existing NDP in light of current developments seems to be a priority. In addition to the periodic (4-5 years.) joint national sector surveys, intermediary sub-regional studies may also generate timely information for the sector.

Health system governance, leadership & management in Ethiopia

Tiruneh Sinnshaw, BSc, MPH

Introduction

Governance in the health system implies to how health care provision is structured, directed and resourced at different levels. The administrative structures at the federal level such as the offices of the ministers, the offices of the directors and that of the federal health institutions form the federal levels of health governance. Then; follow regional health bureaus, the zonal and woreda health offices as well as the health facilities. The human resource that inspires, mobilizes and strategizes the functions of the various structures for intended results constitutes the leadership of the health system. (1)

It is notable that neither the listing of the above health management structures nor the levels of leadership which follow is exhaustive. Nevertheless, those levels of details could be considered adequate for an assessment of the governance and leadership situation of the Ethiopian formal health sector.

If one wishes to go "international" about defining governance and leadership at the service of a health system, one could refer to the systems' building blocks which relate to organizational practices and policies, (availability) the best of resources, appropriate use of staff working hours, satisfaction of patients and providers, capacity to assemble and manage resources. Concomitantly, analysis of governance and leadership would lead to examining whether effective leadership and governance ensure the existence of strategic policy frameworks, effective oversight, coalition building, provision of appropriate incentives, and attention to system design, and accountability. (2, 3)

To try to adapt the above international (WHO) provisions/guides, one could assume that an important part of the assessment of the health system in Ethiopia would be to examine how well the functions of each structural level are defined, linked and realized on the ground by the appropriate levels of leadership.

Good leadership qualities and practices in the health system are not attributes leaders are born with, but characteristics often to be acquired through education, specific/purposeful training and experience. Clearly stated job descriptions and objectives of any level of leadership are essential for recruitment and appointment of qualified leaders at all levels. Job descriptions are also good starting points not only for monitoring/supervising the performance of a leader but also for the incumbent to self-assess his/her strengths and short comings for course correction enhancing effectiveness*.

It is well known that the structures of the Ethiopian health system compare well vis-à-vis international standards in the context of a developing country. The Health Extension program (4) is a rather unique and potentially useful structure though questions arise when one examines the quality and effectiveness of leadership at the various levels. For example, is health systems leadership at the crucial regional and woreda levels satisfactorily professional and effective? What are the educational, training and experiential requirements for these positions? To what extent do political loyalties have influenced or been determinant in the appointment, retention and career development of such leadership?

** Road map/Guiding Principles for the Ethiopian health Sector, a draft by Tiruneh Sinnshaw, 03/03/2020 (unpublished document);*

What health advocacy, communication, planning, managing and community organizing tenets do they have? How strong is their staff supervision and support practice? And assess other related attributes**.

The attributes of governance and leadership towards the provision of quality and equitable health services is well recognized. It is to this effect that this review attempts to make critical observations and consultations to diagnose anomalies and put forward reflections to the larger health community. Be it in resource rich or less resourced countries, health care systems leave much to be desired in health-related governance and leadership. Much more so in less resourced countries such as Ethiopia.

High burden of communicable and non-communicable diseases, chronic shortage of medical and diagnostic supplies,

rather unsatisfactory quality of health care, significant dependence of the health budget and the virtual absence of consultation with communities about health plans and strategies affecting them can be mentioned to justify the potential usefulness of assessing the ills and propose possible remedies to improve governance and leadership at the different levels of the health system. (5) This assessment is to be followed by recommendations for the way forward.
We carried out series of formal and informal discussions with peer groups within the EPHA membership and leadership during the period of the study; reviewed relevant and readily available publications on various strategies, plans and reports etc. produced by the Federal Ministry of Health, RHBs and Woreda health offices as well as selected WHO documents. Several meetings and interviews were also made with selected Federal and Regional Health Officials, and with concerned group of five health professional colleagues.

Furthermore, informal personal observations made at urban and rural health services facilities, including hospitals, health centers and health posts were also considered. Hence it is important to examine the Ethiopian Health System, understand its ills and hopefully offer suggestions for action. Let's primarily look into the

***The Ethiopian Health Sector, from my perspective, submitted to the EPHA Advisory Council by Tiruneh Sinnshaw, 24 October, 2019, Addis Ababa, Ethiopia (unpublished document)*

system's legislative basis, its governance arrangements, its structural components and its perceived/assumed public service functions at various administrative (Federal, Regional and Woreda) levels.

The context
In examining the Ethiopian Health System, the following legislative provisions are worth bearing in mind: Articles 41, 43, 44 and 50 of the Ethiopian Constitution state that: (6, 7)

- **Every Ethiopian National has *the right to equal access to publicly funded social services***. *["Equal access is often hampered by distance and financial limitations]*
- The ***State has the obligation to allocate ever increasing resources to provide to the public health***, education and other social services. [The obligation seems to be routinely ignored as far as the health sector is concerned. It is chronically inadequately funded by any standard]
- Nationals have the right to participate in national development and, in particular ***to be consulted with respect to policies and projects affecting their community***. *[It can safely be assumed that the people ("nationals") are not "consulted" except when it comes to raising funds for one cause or another determined by local or higher officials]*
- Adequate power shall be granted to the lowest units of government to enable the people to participate directly in the administration of such unit. [With regard to the health sector, woredas seem to be "granted" more than "adequate" powers but seems to be ill-prepared and ill-resourced to exercise the powers to the full benefit of communities who, in any case, have little or no opportunity of meaningful "participation"]

Under Powers and Functions of States (8), Article 52, it is stated that "each State (Regional and City Administration) has the power and function "to formulate and execute economic, social and development policies, strategies and plans of the State". {It would be interesting to examine the extent to which the "powers" and "functions" have been exercised by the States. The evidence may still confirm that such powers and functions are highly centralized at federal level, be it in relation to the health sector or others.

Proclamation No. 1097/2018 (9) defines the "Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia. In Part III of this proclamation number 27, The Ministry of Health has the powers and duties, among others, to:

- "Formulate the country's health sector development program; follow up and evaluate the implementation of same.
- "Ensure adequate supply and proper utilization of essential drugs and medical equipment in the country".
- Collaborate with the appropriate bodies in providing quality and relevant health professional training within the country. [There is need to examine what role the Ministry of Health is allowed/mandated to play in the production of health human resources in general].

It is important to note that, the Ministry of Education is to "set education and training standards; ensure implementation of same as well as set minimum standards for education and training institutions. And the Ministry of

Science and Higher Education has the powers and duties to "design strategy and upon approval follow up the implementation of the country's technical and vocational education and training" as well.

The above Constitutional provisions and Proclamations are important to bear in mind as one examines governance and leadership functions and accountability in the health system. The Ministry of Health does not seem to be playing significant roles in the training of health workers which are critical in providing health care and leadership. This suggests a re-visit of the operational relationships between the producer of human resources, the Ministry of Science and Higher Education and the larger employer of the health workers, the Ministry of Health.

The Health Sector Governance Structure

With regard to current and future leadership, governance and management of the health sector in Ethiopia, the following important points are reflected in the Health Sector Transformation Plan: (10, 11)

1. A Joint Consultative Forum (JCF): the highest governance body that decides, guides, oversees, and facilitates the implementation of the HSTP II. It is also a forum for dialogue and consultations on the overall policy direction, reform and institutional issues of the health sector between the government, development partners and other stakeholders. Chaired by the minister of health, co-chaired by the HPN chair and the secretariat will be the PPMED. The membership of JCF is comprised of high level representatives of federal government bodies, representatives of the HPN development partner groups (multilateral and bilateral development partners), NGOs, the private sector and health professional associations.
2. The Joint Core Coordinating Committee (JCCC): This serves as the technical arm of the JCF; and will be composed of PPMED, staff and senior members from the HPN Group and is chaired by the Director of PPMED.
3. MoH-RHBs Joint Steering Committee: ~~is~~ a forum that brings together the Ministry of Health, MOH agencies and the Regional Health Bureaus. The meeting is chaired by the Minister of MOH and the participants include the State Ministers of Health; Heads of:- Directorates at FMoH, Regional Health Bureaus, departments/services of the Ministry, as well as Monitoring and Evaluation Heads at RHBs. The Committee is also responsible for updating the plan as well as for introducing new initiatives, policy guidelines and programs, creating systems and mechanisms for communication and information/ experience sharing.
4. Management Committee (MC) and Executive Committee (EC) at MOH, MC that is composed of the Minister, state ministers and directors of the directorates will meet regularly to guide and follow the implementation of the plan. More over an Executive Committee which is composed of the Minister and Director Generals of agencies will meet regularly to guide and follow the implementation of the plan.
5. Regional, Zonal and Woreda level management committee and sector forums will be established and monitor the implementation of the HSTP in each level. More over program specific advisory groups and technical working groups will be established as deemed necessary. *[Note: With so many committees meeting and deliberating on health matters so often, one wonders how effective or time consuming the situation is]*.
6. The overall planning frame work consists of strategic and annual plans, and strategic plans such as HSTP II are to be cascaded to annual operational plans for their actual implementation. Both strategic and annual plans are the results of consultations of top-down and bottom-up processes. The bottom-up process ensures that the priorities and targets of regions and districts take local challenges and capacity in to account. Annual plans describe the activities in the health sector in the geographical areas, and starts with resource mapping that lists all the planned expenditure by government, donors, NGOs and other stakeholders.
7. Woreda Transformation: A transformed Woreda is operationally defined as "a Woreda with a transformed district health system". A transformed Woreda is expected to have a leadership with an accountable and transparent system that creates an enabling environment to translate plans into results.

Main problems/short falls:

- The "State" has not yet allocated adequately "resources to provide to the public health" as envisaged in the Constitution or even not yet reached the Abuja declaration of 15 per cent of the annual national budget. The "national's right to be consulted with respect to policies and projects affecting their community" as also envisaged in the Constitution, seem not to be taken seriously.
- Reviewing A study report on "Primary health care systems", published by Jimma University and WHO (in 2017) and the Health Sector Transformation Plan useful information on Ethiopia's Health Systems that outlines Ethiopia's administrative structure. It indicates that there are ten Regions (eleven since October, 2021); Two City Administrations, 558 Woredas and about 15,000 Kebeles. The health structures relating to these administrative levels are called Regional Health Bureaus (including city bureaus of the chartered cities

of Addis Ababa and Dire Dawa), Woreda Health Offices and kebele Health Posts (11, 12). It is worth noting the following description on its functionality:

The Federal Ministry of Health is responsible for health policies and ethical guidelines as well as coordination of donor support. Its relationship with the RHBs is said to be "still evolving".

1.1. The Regional Health Councils develop regional policies and plans and determine health budgets" (to be administered by RHBs; the RHBs are responsible for Regional Hospitals. (Zonal Health Departments are just branches of RHBs). It needs to be emphasized that "the RHB is under its respective Regional administration with authority emanating from the Regional Council which also decide what budget is allocated for the regional health activities.
1.2. Woreda Health Offices which are accountable to Woreda Councils, have "only technical links" with their respective RHB's and ZHD's. The Woreda Health Offices "oversee Primary Health Care Units (consisting of district hospitals, health centers and health posts). The "woreda health offices" are responsible for planning, implementation and evaluation of district (woreda) health activities.

With regard to Ethiopia's Health Services structures the following are to be noted: (13)

1. A "Specialized hospital" provides "tertiary level health care" for an estimated population of 3.5 to 5 million
2. A General Hospital provides "secondary level health care" to an estimated population of 1 to 1.5 million; it has a staff strength of about 234 professionals; it serves as a referral center for primary hospitals
3. Under the Primary Health Care Unit:

3.1. A Primary Hospital serves a population of 60,000 to 100,000
3.2. A health Center serves a population of 15,000 to 25,000; with a staff strength of about 20 health workers; a health Center supports and supervises 5 Health Posts; and
3.3. A Health Post serves a population of 3,000 to 5,000; operated by two Health Extension Workers who support and supervise voluntary health workers, called "Health Development Agents".

The above description of the Ethiopian Health structure indicates that the Federal Ministry of Health seems to have little to say in determining the government Health Budgets allocated and administered at Regional or Woreda (District) levels. This is bound to affect the establishment, staffing and management of the various levels of health facilities. The important Primary Health Care Units (PHCUs) are administratively "victims" or "beneficiaries" of the quality of administrative and professional leaderships at the district levels. Thus health policies and strategies prepared by the Ministry of Health and its international "partners" can only be realized to the extent or limit of the quality of "woreda" administrative officials and financial resources at their disposals. One can also assume that "woreda level leadership" cannot be expected to be endowed with sufficient management or professional excellence, commensurate with the vital responsibility of health systems governance and leadership! Management leadership at these levels may not fully understand the federally generated health plans and strategies, it is small wonder, therefore that health facilities are bound to be poorly staffed and managed. These limiting conditions coupled with virtually non-existent regular support and supervision are bound to lead to poor planning, budgeting and management of health care services to the people. Unfortunately, most of the people are not aware of their rights for adequate and uninterrupted quality health care either.

Determining the missions, objectives, programs and budgets etc. of the Health Sector has largely been the assumed function of the Ministry of Health and its external funding "partners" at the central level.

The current health sector governance where by the Ministry of Health and the Regional Health Bureaus have little or no accountability to deeds and possible misdeeds which occur at the woreda levels is a matter of serious national concern. Phrases like "meaningful participation" of stake holders in the development of national health plans and strategies would be meaningless under the current isolated activities and isolated accountability among the Federal, Regional and District health systems. It appears that the administrative decentralization of the system has led to unwarranted professional and administrative DE-linkages among the three levels of health systems management.

Because the public or government health care system gathers and disseminates relatively good data and information, one does not experience much difficulty in assessing its situation. However, as far as the contributions and the situation of the private health care activities are concerned, there is not much one can write about. Yet cursory observations and subjective assessments by keen observers suggest that this important part of the health sector needs

to be aligned, regulated and supported as an integral part of the overall health care system of Ethiopia. Observations also suggest that many people, especially in urban areas prefer to go to private hospitals, clinics, diagnostic facilities and pharmacies.

The usual complaints about government health facilities include over-crowding, non-compassionate reception, lack of prescribed supplies such as drugs etc. at government health facilities. On the other hand people also complain of high costs, unnecessary surgical procedures and multiple prescriptions and tests at private facilities. (14)

Suggestions for improvement and further detailed analysis:

1) First and foremost, it is necessary to recognize that the overall health system would benefit from a dispassionate and professional examination of how well it is functioning and how effectively it is accessible to the people at large via-a-vis the laudable and well documented "commitments" of the current and past governments.

2) The Federal Ministry of Health, the Regional Health Bureaus and Woreda Health Offices should be committed to the participation (consultation) of the sector's stakeholders to own major plans, strategies and modalities of implementation of health care services in Ethiopia. After all, the Constitution provides that "nationals have the right to participate in national development and in particular to be consulted with respect to policies and projects affecting their community"***.

3) The government health budget is unacceptably low by national, continental (Africa) and international standards. The Abuja declaration recommendation level of at least 15 per cent of the national budget should be reached and at the same time the pros and cons of external funding of the health sector should be carefully examined in the interest of sustainability.

4) Serious consideration should be given to review the functionality and the professional/technical merit of relations of the current decentralized structure of Regional Health Bureaus and the Woreda Health Offices vis-a-vis the Federal Ministry of Health.

***Participatory Health Sector governance and leadership, a draft by Tiruneh Sinnshaw, 04/09/2020. (Unpublished document)

A situation where by neither the Ministry of Health nor a Regional Health Bureaus may not seem to be directly accountable to shortages of woreda level resources (financial, human power and material necessities) is tantamount to abandonment of responsibilities for enabling the people to access basic quality health services equitably, in the national context.

5) In order to assess, and eventually monitor the effectiveness of health systems governance and leadership, it is important to document and avail to any interested party, roles and responsibilities expected to be played at each level. For each level role and responsibility, expected minimum educational and training as well as experiential requirements should be set and consistently respected in the appointment/placement of any official or officer expected to manage the concerned federal, regional or woreda health structure.

6) As an indicative idea for meaningful participation of stake holders ,the National Assembly, the House of Federation, the Regional and Woreda Councils, health professional associations and the mainstream media needs to be given opportunities to read and provide feedback on, at least, medium and long-term national health plans and strategies. The plans and strategies and periodic reports, mostly documented in English, should be made available in Amharic and to the extent possible, in the other local languages as well.

7) The Federal Ministry of Health, the Regional Health Bureaus and the Woreda Health Offices should be committed to provide transparent and comprehensive annual or two-yearly reports, on the performance, challenges and ways forward of the health sector, at their respective levels. The reports should be widely shared with the media and the above mentioned stake holders, as may be applicable.

8) It is also important that governance in relation to production and deployment of health human resources be reviewed by the ministries (Ministry of Health, Ministry of Education and Ministry of Science and Higher Education) concerned so that production is aligned to existing and anticipated needs of the sector, both public and private. [Production of "excess"/unabsorbed health workers of whatever quality is a national waste].

9) In order to monitor and eventually take necessary measures to assure good governance and accountability at all levels of the health system, minimum educational/training and experiential requirements of managers /administrators of health institutions and health facilities should be transparently established. These institutions and facilities include, Directorates in the Federal Ministry of Health, Regional Health Bureaus, the various Federal Health Institutions, including Federal Hospitals, EPHI, Food and Drug Administration etc. Equally importantly the educational/training and experiential minimum requirements for leadership at Zonal/Woreda health offices, hospitals and health centers should be established and adhered to in the appointment of health leaders regardless of their political affiliation.

10) The FMOH and where applicable, the RHBs in collaboration with health professional associations and other stakeholders, should advocate for meaningful participation of the health sector in the future education and training of candidate health workers.

11) The role of the Health Extension Program towards enabling individuals and communities to access universal health care needs to be revisited so that this otherwise laudable program does not compromise people's access to adequate curative and rehabilitative care.

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The Primary Health Care Unit approach in the Ethiopian health services delivery towards achieving UHC

Tesfaye Bulto, MD, MPH

Background:

Emerging and remerging infectious and communicable diseases, non-communicable diseases and injuries are concerns of the health service delivery system of Ethiopia. To meet the goals of universal health coverage and health outcomes commensurate with health SDG, Ethiopia needs to restructure its service delivery system most importantly to improve the referral system, continuum of care and supportive supervisory mechanisms.

Currently Ethiopia's health service is structured into a three-tier system: primary, secondary and tertiary levels of care. At the secondary and tertiary level, are general referral hospitals and specialized hospitals. The primary level of care includes primary (or District) hospitals, health centers (HCs) and health posts (HPs). (1)

In the past primary level health care development has been constrained by the heavy emphasis on central, top-down approaches, predominantly urban based, curative health care system. Countries started to give attention to primary health care after commitment was expressed in Alma-Ata of 1978 in pursuit of Health for All. More recently also in 2018 Governments that convened on the Fortieth Anniversary of the Declaration of Alma-Ata in Astana issued yet another Declaration that reaffirmed commitments to strengthen PHC to achieve universal health coverage (2). Ethiopia's plan to achieve universal access to PHC was prepared and embedded in the Health Sector Development Programme (HSDP) III in 2005 (3, 4). This plan aimed at addressing shortcomings of service coverage within the health system through accelerated expansion and strengthening of the Health Extension Program (5). The health services provided at various levels were then organized into the following themes: (i) Family Health Services, (ii) Communicable Disease Prevention and Control Services (iii) Hygiene and Environmental Health Services (iv) Health Education and Communication Services, (v) Basic Curative and rehabilitative care.

The Ethiopian primary level health care gives emphasis on investing in preventive and promotive health services, as indicated in the policy and health sector transformation strategy documents (3,4). However, with the realization of the fact that curative services not only prevent unnecessary deaths but also contribute to prevention of the spread of diseases, efforts have been made to avail basic curative care, at the HPs (4). Health service packages at community level are developed to reach families at their homes with messages to enhance preventive and promotive actions to build knowledge necessary for child and maternal survival and to achieve the Millennium Development Goals (MDG) 4&5.

As a result, the performance of maternal and child health programs in Ethiopia has shown improvement as seen by an increase in the utilization of key maternal and child health services. Encouraging improvement in life expectancy at birth, notable reduction in maternal and under - five mortality and infant mortality were also achieved before the MDG deadline (6). However, at present there are serious challenges to maintain the momentum (5). The National assessment of the HEP in 2019 has identified the needs to expand HEP service packages and improve quality of care to meet the growing needs of the community. In addition, as Health Sector Transformation aligns with Sustainable Development Goal (SDG) primary health service should include non-communicable diseases and mental health (7,8). There is now a common understanding that organizing PHC functions based on PHCU concept will be necessary to improve quality of frontline health services.

This paper is a reflection on existing opportunities and challenges in the efforts to strengthen and expand PHCU in Ethiopia. It is mainly a personal opinion based on more than 50 years of experience through serving at different level of Ethiopia's health delivery system and most importantly close participation in the implementation of the Health Extension Program.

Primary Health Care Unit (PCU)

The primary health care unit (PHCU) comprises five satellite HPs, referral HCs and primary hospital. A primary hospital provides inpatient and ambulatory services to an average population of 100 000 and serves as a referral center for the HC. A health center provides preventive, promotive and curative services for 15,000 to 25,000 populations. A satellite HP provides mainly preventive and promotive health services but also selected curative care. Health Development Teams (HDT) comprising up to 30 household residing in the same neighborhood are organized to link communities with the PHC.

PHCU activities are planned and monitored at District /Woreda level (1,7), as detailed in the Woreda Transformation Document, Amharic version is available but lacks follow up for its effective implementation, as it is the case with many other useful guidelines issued by the MOH (8).

The usefulness of organizing the health service facilities to function as a unit in a defined catchment area cannot be contested (10,11). However, it could be essential to examine opportunities and challenges to expand and maintain this approach in Ethiopia.

Opportunities:

- The production of human resource has increased with the opening of new universities in the country.
- The lowest structure of the health service at community level is institutionalized and various approaches for strengthening community based interventions are developed with the help of local and international partners committed to the achievement of MDGs/SDGs, primarily for family health programs. Those includes:
    - ✓ In-service training modules for skill building and mentoring. Most important ones are on Supportive Supervision, Use of Data for Decision Making and Management of major killers of children (IMNCI), BCC tools, etc.
- Much investment has been made to improve accesses to HCs, and all woredas have more than one HC with each serving 15,000 to 20,000 people. There are attempts to avail Ambulances to all HCs.
- The expansion of District Hospitals has also been encouraging with each hospital serving 60,000 to 100,000 populations.
- The recognition of the importance of Essential Health Service Package is an important milestone, as emphasized in the 20 years envisioning draft document.

Challenges:

- Lack of well-developed and monitored referral system. Even though much is talked about the necessity of establishing the system and initiatives had been taken to implement it by some regions in the past, but it has not been possible to make it sustainable.
- High turnover and lack of motivation of HWs due mainly lack of career structure and educational development for important category of HW such as Health Officers ad HEWs.
- District level management is still inadequately manned and lack the necessary leadership capacity to take responsibility for their work, most importantly coordination of planned activities and proper utilization of financial resources.
- Weak supply chain management and quality assurance.
- Health workers prefer to work in urban areas and cities where par-time opportunities are available in private institutions.
- Unacceptable working environment. Many health centers have no regular water supply and electric power. The HEWs are functioning in some very much substandard facilities due to the initial assumption that they will not be providing curative service.

General Remarks and Suggestions:

- Organizing the PHC service as a unit is a brilliant strategy for ensuring continuum of care for patients. However, communication network needs to be established and proper orientation should be given to all concerned and accountability should be established.
- Conducting supportive supervision, including continuing education should be enhanced in a sustainable manner.

Functioning as a "Unit" is vital to promote engagement of higher health facilities to take the responsibility of strengthening the peripheral health facilities through, supportive supervision and mentoring.

- What would be needed for this to happen is strengthening management skill through in-service trainings on subjects such as supportive supervision, Use of Data for Decisions Making (UDDM), etc.
- Capacity of District/Woreda management should also be strengthened to facilitate such efforts and its implementation should be monitored.
- Use of new technologies is essential to improve communication and Universities should help with use of innovative communication strategies.

For the HCs to take the responsibility of supporting 5 satellite Health Posts within their catchment area there should be motivated Health Officers serving as Directors of HCs

- The Road Map for HOs drafted by a Task Force established by the Public Health Officers Association is submitted to FMOH a year ago and still awaiting approval by the policy makers. It is proposed that new graduate HOs shall be deployed in rural health centers and subject to good performance they should be given opportunities for postgraduate studies and serve as managers/Directors of primary hospital, or district health office (9)
- Approval of the recommendation of the HOs association (the Road Map) is crucial at this stage

Mostly, policies and strategies are well developed and looks attractive on paper, but the specific elements of the health service delivery need to be clearly understood. Regions and health facilities have limited awareness of some elements as defined at the central level.

- There is a need for proper dissemination and orientation of documents at implementation level.

The policy and strategy documents contain universally believed statements and commitments made to UN declarations. For example, in HSTP II the following statement is made:

"Health of people is both means and product of development. It is a means since healthy people are more productive physically and mentally driving the economy of a nation. It is a product as good economic status of a nation allocates more resource to health to keep their people healthy".

"Investing in health is investing in the current and future generation towards sustainable development. Health is also a measure of inclusive growth that should commensurate with the economic development."

We often say that health service is a human right!

The question is how much do we advocate for increased commitment of the government to allocate enough budget and all necessary resource for motivating health work force, improving work environment, availing the necessary supply.

- We need dedicated leaders with the necessary capacity and experience to deal with politicians and decision makers at all levels and scientific advisory committees to advise on preparations of advocacy papers/publications for continues awareness creation of the public and policy makers. Professional associations (EMA and EPHA) should also take part in those endeavors.

Regulatory capacity for safety and quality needs to be strengthened to ensure the adherence to the implementation of standards including the essential health service package.

- Capacity assessment should include competency assessment of pre-servcie training and performance evaluation for all health workers.

Financial resources and technical capacities are often secure from partners for control program such as HIV/AIDS and now for controlling the spread of COVID 19.

- Health system strengthening (HSS) efforts can be supported through such opportunities by integrating the programs into general health services and building support systems/cross cutting function (such as, innovative technologies) for the wider Health System.

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Human Resources for Health (HRH): Vital for Ethiopia's Progress towards UHC.

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1. Introduction:

Ethiopia continues to suffer from acute shortage of health workers at every level of the health care especially in rural areas where the majority of the people live. This is despite the country's efforts over the last decades since the establishment of the Gondar Public Health College and Training Center in 1954 (1). With the fast-growing population and limited financial resources, the country needs to examine its implementation strategies and make adjustments to sharpen approaches that can help address workforce shortfall, and issues related to competence, uneven distribution, mix mismatch and management. With only nine years left to achieve the SDG health targets of universal health coverage by 2030 such exercises would be mandatory.

The Federal Ministry of Health's National Human Resources for Health (HRH) Strategic Plan for Ethiopia 2016-2025 (2) clearly states the key challenges the Country is confronted with. Those include weak HRH leadership and governance at various levels, poor quality of HWF education and training, underdeveloped HR management systems and practices, weak HR information systems, evidence driven HRH planning, insufficient financial resources for HR development and management, weak interagency coordination for HRH development, and weak HRH regulatory capacity. Those challenges have contributed to the current HRH problems experienced by the Country.

While the challenges are well identified and articulated, it is evident that the approaches and extent of interventions used by the country to respond to the HRH problems did not yield expected results. Hence those critical problems have persisted and continue to compromise quality, coverage, management, leadership and governance of the health care system.

Ethiopia's national HRH strategy and implementation involve multiple players, in addition to the FMOH structures at Federal, Regional and Wereda levels in various key functions. Therefore, in order to ensure accountability in HRH performance of the country, it is critical to strategically engage all stakeholders involved in the health workforce training and deployment. Joint assessment and action on policies, implementation strategies, resources, quality output, and HRH management must be prioritized to enable the country to efficiently and strategically move forward and make inroads into the persistent HRH challenges.

The paper intends to reflect on critical concerns and share suggestions for technical and policy considerations. In preparing the paper the FMOH and WHO documents and related reports, including Google sources on HRH were used as reference. Regular discussions with senior public health professional colleagues, brief consultation with the HRH Director General and other heads and staff of the various MOH Directorates were held to have better understanding and insight on current national HRH planning, programming, leadership and management including allocation of resources and integrated monitoring of performance across HQ, Regional, Zonal and Wereda levels in light of the decentralization. In addition to readings and consultations mentioned above, the paper also reflects on personal observations and experiences gained by the author at national and international levels. Accordingly, selected critical HRH issues were reviewed and analyzed to forward actionable suggestions. Acknowledgements are due to all those who contributed to the document.

2. Reflections on Specific Critical HRH Issues

2.1 Training Output and Quality

2.1.1 Training Output and Services Coverage: The National HRH Strategic Plan for Ethiopia 2016-2025 cited above, the section on HWF Density and Distribution indicated that in 2015/2016 the country's health worker to population ratio was 1.5 health workers /1000 population for all health workers including HEW. However, when considering only medical doctors, nurses, midwifes and health officers, the ratio stand at 0.73/1000 population. As indicated in the same FMOH National HRH Strategic Plan Document the ratio has slightly increased to 0.96/1000 population, still very far below the World Health Organization (WHO) standard set for sub-Saharan Africa which is 2.23/1000 population. This severe shortage could be attributed to inadequate investment on HRH, poor planning and implementation on production, deployment and management of Health Workforce (HWF). According to the African Health Monitor Jan-June 2007 vol. 7 No.1 Those factors are

consistent with the other sub-Saharan African countries (4). It is also worth noting that Ethiopia's inconsistent parameters, such as including and/or excluding HEWs into health worker to population ratio measure continue to cloud policy makers to have clear grasp on the gaps needed for strategic policy decisions.

The National HRH Strategic Plan showed that between 2009 and 2014/15 the number of medical schools increased from 7 to 35 with annual enrollment rising from 200 to 4000. Total number of physicians increased from 1540 to 5372. Similarly, in the same period Midwife training schools expanded from 23 to 49 and the number of midwives increased from 1270 to 11,349. While expansion of training schools and training outputs are notable both in the private and public sectors, it is equally important to have researched evidence to determine the proportion of health workers in various categories gainfully employed, in terms of increase in access and impacting on the health profile of populations served.

The 2019/2020 Health Sector Performance Summary also showed that 353 functional Primary, Regional and Specialized Hospitals exist in the public sector (accurate number in the private sector need to be verified and indicated). The same report indicate that the number of Health Centers has increased from 3586 to 3735 between 2012/13 and 2018/2019 respectively. For the same period number of Health Professionals in the public sector reached 17,975. However, these increase in HWF training must be strategically balanced and aligned with operational resource allocation and infrastructure expansion so that the staffing standards set by FMHACA is realized at the different levels. Conversely, ensured availability of adequate operational resources is critical for full deployment of trained HWF preventing unemployment, dissatisfaction and out-migration.

A case in point is the FMOH "flooding strategy" implemented in 2008 under the Government HRH 2020 Strategy which was supported by the Health, Reproductive health and Nutrition donor group including PEPFAR, DFID, WHO and others The main purpose of the strategy was to rapidly produce large number of health workers particularly Medical Doctors, Nurses, Midwifes, Health Officers and Health Extension Workers primarily to overcome the severe shortage of HWF, improve Health Services Efficiency to meet the FMOH HRH 2020 Strategic Goal (5). The plan was also to off-set the HWF loss due to international migration. While the donor funding was mainly to rapidly increase training output, without commensurate attention to budgetary support needed to expand health infrastructure and health system strengthening including improvement in quality of services.

Such unbalanced and accelerated HWF output resulted in "surplus" HWF that floated and remained unemployed against the glaring shortage of professionals for the provision of health services to the needy and most deprived population, especially in rural Weredas. Some of the unemployed health workers left the country. Those that were deployed in rural areas, were disappointed with extreme shortage of medical equipment, drugs and supplies and moved to urban centers employed in NGOs and the private sector, while few ventured self-employments. The "flooding strategy" could not be sustained and could be considered unwise and wastage of the meager health sector resources. HWF training and deployment is a very expensive long-term venture that require meticulous planning and effective and efficient utilization of those resources. Regular re-assessment of HRH status is necessary including task analysis and task-shifting especially for mid-level health workers and must be carefully planned and implemented by putting in place evidence based remedial measures prioritizing equity, sustainability and efficiency in resource (human, material, financial) utilization. There is no readily available data on number, category and distribution of public health professionals. This would require immediate national attention to identify and address gaps.
Please see table 1 below on health professionals' distribution by region noting equity.

2.1.2 Quality of Training: It is understood that there is inter-sectorial collaboration in planning and implementing the national HRH strategy, with key stakeholders. However major responsibility on health workers training fall on the Ministry of Science and Higher Education (MOSHE) to guide Higher Learning Institutions, as well as Higher Education Regulatory and Quality Assurance (HERQA), that determine quality, level and competence as well as standards of physical infrastructure, lab of training schools and outreach facilities. In-service Capacity-building Professional Development (ICPD) and also FMHACA (currently responsibility has moved to FMOH) a semi-autonomous body under the FMOH used to determine training curriculum including defining staffing and skill mix standards in health care facilities at different levels, including certification of facilities and HWs in the private and public sectors. With such scattered accountabilities including autonomous institutions for evaluation and auditing, licensing accreditation and recognition etc. has been difficult for the FMOH to effectively guide, monitor and streamline the various players to ensure quality and standards to ensure national FMOH goals and commitments.

Training on public health without defined and standardized core competencies for public health professionals is concerning as this remain the core business of the sector. A number of training institutions produce public health professionals at undergraduate, and post graduate levels without standardized and defined core competencies and this is even worse where trainers and supervisors are not well prepared themselves. This gap was realized by the EPHA and others where a taskforce was commissioned to review and provide recommendations. Thus, a group of senior Public Health Professionals and academics undertook an extensive study, consultations and practice analysis towards "Developing Core Competencies for Public Health Workforce" (6). The taskforce recommended set of competencies, but the recommendations are not yet implemented despite the dire national need for one. It is advisable that the FMOH and the Federal Ministry of Education take urgent action in implementing the recommendations that are expected to have an impact on quality of Public Health Education and Training in the country. Similarly other areas that require immediate and critical attention and policy decision are the areas of competencies on use of technologies in the sector, including the vast areas of Robotic Technology and Artificial Intelligence (AI) in the sector as may be appropriate.

Report on the Ethiopian Education Development Road Map (6) identified the unprecedented rapid expansion of Higher Education Institutions, Universities, Colleges and Vocational Training Schools in the public and private sectors. Lack of matched resources required to keep quality including poor standards set for teaching staff and facilities, have negatively affected quality of Higher Education performance in the country. Furthermore, practical hands-on training, communication and community engagement and public health research skills, attitudes on empathy and ethics, are least prioritized in the overall HWF training. The writer's personal impression is also that high politicization and commercialization of higher education in Ethiopia aggravated by poor quality primary, secondary and preparatory education continue to affect quality of training performances in Higher Education in general and HWF training in particular. Health is multi-sectoral and the interrelatedness of healthy population to productivity and national development is well established and must not be left to the health sector alone. Realizing the contribution of effective HRH training deployment, management and retention on the population's health, and appreciating the heavy investment and multiplicity of factors affecting healthcare delivery, it is critical that key players are brought on board to ensure congruency in policy, strategy and resource at National Level. It is considered highly critical to have a High-level Multi-sectorial National Body on Ethiopia's HRH to regulate, prioritize, guide and provide oversight on quality and equity towards the attainment and sustainability of the SDG Targets.

2.2 HRH Leadership, Governance and Accountability

2.2.1 Leadership and Accountability at the FMOH: The HRH Directorate under the FMOH State Minister is responsible for matters related to overall national health workforce guidance, planning, implementation, and monitoring of HRH. However, as stated above multiple stakeholders are actively engaged in handling critical HRH responsibilities. The arrangement calls for strong leadership at FMOH to effectively play its role on guidance, streamlining, monitoring and coordination of the various players for accountability and partners' compliance on national and international targets and goals including service quality and equitable coverage. Presently it appears that different HRH players act independently responding to their own needs, underestimating the implication of their decision on attaining national goals. Hence, the leadership capacity of the HRH need empowerment and strengthening equipped with required management tools, technical skills, resources and administrative authority needed to effectively discharge this overarching role. Raising the status of the Directorate to a higher level would be an advantage to effectively guide and uphold HRH that underpin performance of the health sector. Having the HRH 'right' is a key determinant for quality and universal coverage of health services.

2.2.2 Decentralization Policy and Process: Federal, Regional and Wereda Councils are empowered to make strategic decisions including allocation of annual capital and operational budgets, while Sectorial Ministries including Health and Education have limited say in such major decisions. Most Council members at various levels are political appointees with limited orientation on health priorities. As a result, the sector has continued to suffer budgetary limitations because it is presumed to get enough donor funding. This has negatively impacted on the quality and equitable access to health services. For example, Weredas fail to accept graduate health professionals due to lack of budgetary allocation to cover operational and infrastructure expansion costs. Despite population's dire health service needs these expensively trained young professionals have ended up unemployed and many end-up migrating to other countries. As a long term strategy, strengthening the PHCU leadership and national policy on sector's engagement as member of the Wereda Councils could help improve member's awareness and possible sector's resource allocation.

To strengthen the leadership at Wereda PHCU levels it has long been recognized that reactivating the Health Officer training to assume this critical leadership role in the sector as very critical. This has also been confirmed by the recent study and recommendation on "Road-Map for Health Officer Workforce" of March 2019 (7) led by the Ministry and it is urgent and critical to consider implementing the recommendation which also highlight the cohesive inter-relationships between the FMOH, Regional, Zonal and Wereda levels for systematic referral, supervisory and capacity building.

For a catchment population of 100,000 the Wereda PHCU consisting of a Primary hospital linked with five Health Centers, each serving 25,000 - 40,000; and five Health Posts targeted to serve 5000 people. That cluster of health facilities and its catchment population has been identified as the key functional unit of a health care system for optimal health care delivery at Wereda Level with effective leadership management and governance, inter-sectoral collaboration and participatory community engagement. Ethiopia's National Primary Health Care Strategy considers the PHCU as the foundation and entry point that interface between the community level and institutionalized health care facilities from general to specialized services. Capacities of these service institutions are strengthened through training, referral and supervisory functions. Conceptually, the Wereda PHCU serves as a nucleus ensuring access, integration and interlinkage of network of facilities to ensure continuum of care from community to the highest levels. Therefore, Health Work Force training at national and subnational level emphasizes ICPD as the bedrock to ensure quality of health care delivery in the country. However, the limited understanding of the concept of Primary Health Care as the National Strategy for Health for All and the PHCU as the Functional Unit for the realization of delivery of equitable integrated services for Universal Health Coverage has weakened the health care system. Furthermore, inadequate competencies in leadership, management and governance in the health care system due to inadequate HWF training and management has further aggravated the situation. This weakness at the Wereda PHCU is indicative of the inadequate structural alignment and functional integration of PHCU in practice coupled with HWF training that lacks inculcation of team-work concept and practice; as well as importance of efficient and effective referral linkage practices.

It is therefore important that Ethiopia's HWF training and management adequately focus on the basic philosophy of building the capacity, competencies and efficiency of the PHCU level through effective basic and continuing professionals development strategies to ensure equity and universal coverage of quality services to enable the country achieve and sustain the SDG targets by 2030.

3. <u>Some Suggestions</u>:

3.1 Strengthening National HRH Leadership: There is an apparent need to improve the institutional arrangement, technical and leadership capacity of the HRH Directorate. This would entail strengthening the Directorate's capacity, technical and behavioral competencies, staffing standards and allocated resources needed for effective cross sectorial and regional leadership; including monitoring, evaluation and operations research for policy advocacy and increasingly improve performance. Institutionalized partnerships with clear roles and accountabilities between FMOH, FMOE, FMOST and other key players must be aligned to meet national standards and targets.

3.2 Training for Woreda Level PHC Governance, Leadership and Management: Ethiopia can capitalize on its rich experience of training health workers for Awraja Health Management that can be applied to the present Wereda level PHCU management and leadership. Sector's representation in the Wereda Council and implementation of recommendations of the study on "Road Map to Health Officer Workforce in Ethiopia 2018-2030" could be prioritized to strengthen Wereda level leadership Health System.

3.3 Pre-service Health Workforce Training: Strengthening and expansion of existing training institutions is imperative to address the extreme shortfall in population to health worker ratio. Use of innovative approaches for pre-service training in the production and deployment of a mix of critical categories and skills in adequate numbers is critical. Accordingly Prof. Abraham Haileamelak's, study published in May, 2018 Ethiopian Journal of Health Sciences; entitled "How can Ethiopia mitigate the HWF Gaps to meet the UHC", confirmed that to achieve the SDG targets, Ethiopia must target the production of about 30,000 (medical doctors, nurses, midwives and health officers) every year for at least the next 12 consecutive years (Ref JU . The current annual production capacity from all health professional training institutions is not more than 10,000 which mean that the production capacity must triple to achieve the target. Major national investment and concerted effort is needed to meet

evolving and identified HRH needs and gaps. Equally important is regular re-assessment and adjustment of HRH training standards, deployment, efficiency and equity, emphasizing HWF retention and client satisfaction.

3.4 Diaspora Engagement: Development and use of sustained institutionalized systems for Diaspora engagement in teaching, services and research is not yet in place. Current individualized positive experiences must be strengthened and institutionalized for collaborative partnerships. Creating effective policies, strategies and making working environment conducive to strengthen partnership between qualified professionals in the diaspora and locally available returnees is an important HRH development strategy, which could be facilitated through knowledge exchange and technology.

3.5 Strengthening Competencies for Public Health Workforce: Equipping the HWF with required knowledge, skill, attitude and ethical practices is essential. Recent study on "Developing core competencies for public health workforce in Ethiopia" has made evidence based recommendations on the need and urgency on what needs to be done in preparing public health workforce for the 21st century (8). Those recommendations are also endorsed by academics and practitioners and need to be implemented as matter of priority.

3.6 National School of Public Health: Ethiopia currently lacks prominent leadership and authority in academics, practice and research in public health. Existing health science schools provide graduates with functional knowledge and skills without the necessary depth. The Ministry's effort to establish the Jimma Institute of Health Sciences (JIHS) was high-jacked by political decision. The JIHS was converted to Jimma University (JU) and in the transition available resources were used by the newly added faculties compromising public health and community-based training. At present Ethiopia lacks the competence and leadership in home grown knowledge and public health practice. The writer strongly believes that Ethiopia needs high-level proficient and eminent Schools of Public Health to further develop the country's capacity in this critical area of essential service teaching and research. Hence, it is strongly recommended that from among existing Schools and Colleges of Health Sciences/ and Schools of Public Health few with strong standing be selected and further strengthened to serve as National Reference Center for Public Health Practice Teaching and Research.

4 Concluding Remarks

The slow paced HWF training output, limited health infrastructure expansion and low budgetary allocation coupled with rapid population growth and high HWF attrition, demand critical re-assessment and identification of workable solutions by all stakeholders, including professional associations. Financial investments on HRH need to be stepped-up, commensurate with the magnitude of the problem and for sustainable scaled-up health workforce training, deployment, management and retention. Appropriate task analysis and task shifting strategies must be used for optimal skill mix based on epidemiology, disease burden, and emerging health and leadership needs. The different stakeholders involved with HRH must be guided by the FMOH with clear accountabilities (9). Current training emphasis on technical competencies in clinical case management and specialization must be balanced with public health competencies in health promotion and disease prevention, behavioral change communication, community engagement, emergency preparedness and response, management, governance and leadership. National policies and strategies on "Essential Health Care Package", "Staffing Standards" and "Universal Health Coverage" must be synchronized and harmonized.

Staffing standards for the different facilities in the Wereda PHCU need to be rationalized as Regional and Specialized Referral Hospitals have staffing standards that are very dense compared to the middle and lower levels facilities. The absence of a well-defined staffing standard for management and leadership units at Federal, Regional, Zonal and Wereda level health bureaus is notable. A well-defined staffing standard and mix for the different units must be determined and appropriate training must be put in place. The HEP, an integral part of the Wereda PHCU should be reassessed and strengthened to respond to the population and health service needs, with appropriate supervision and referral system.

Table 1: MD's, Nurses, MWs & HO's Dist.by Reg. and HW ratio/1000pop 2010 EC; 2017/18 GC

S.N	Region	Population	GP&Sp	Nurse	MW	HO	Total	HW ratio/1000 Pop
1	Addis Abeba	3,515,679	3,567	9249	1708	1690	16,214	4.61/1000
2	Afar	1,856,098	40	512	143	113	808	0.43/1000
3	Amhara	21,486,069	1,374	11,651	3,925	2,309	19,259	0.90/1000
4	Ben Shangul	1,077,841	65	1,228	338	222	1853	1.72/1000
5	Dire Dawa	478,595	133	320	94	46	781	1.63/1000
6	Gambela	453,442	32	752	100	82	966	2.13/1000
7	Harari	250,904	63	540	95	65	763	3.04/1000
8	Oromiya	36,713,473	1,961	16,193	4,535	3,590	23,279	0.63/1000
9	SNN	19,626,077	1,110	10,810	2,248	1,802	15,970	0.81/1000
10	Somalia	5,899,317	397	3,200	1,691	276	5,564	0.94/1000
11	Tigray	5,247,003	440	5,014	1,210	768	3,274	0.62/1000
12	Total	96,604,498	9,182	59,469	16,097	10,953	115,785	1.20/1000

Source FMOH-National HWF updates 2010 EFY (2017/18 GC); HW* per/1000pop. ratio

* HWs include **only** MDs, Nurses, MWs and HOs.

This is far below the Sub-Saharan estimated level.

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Health Care financing in Ethiopia; challenges and opportunities

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Introduction:

Health care financing is one of the crucial factors that determine the adequacy of health development in general, and health care provision in particular. Delivery of health care is a very expensive business, especially when there is commitment for UHC as a national policy. It is asserted that health and health care is a basic right that should be afforded with equal opportunity for all, rather than as good will gesture to be provided as may be possible. It should also be noted that adequacy of health care provision is among the essential needs/demands of populations at large, and a continued source of concern for all: be it financiers, providers, or users. Making health care accessible to all who need it and at the same time keep pace with developments in science and technology to continuously improve on quality of health care is a desire of many, but the escalating cost to pay for such desires has become highly challenging. Hence, health care financing and cost containment have become an imperative agenda of concern by all stake holders at all levels of society*.

There were attempts to generate funding for the health sector in the last seventy years or so as noted in the national health tax system put in place in the early 1940s (1, 2). In addition to the service fee charges that were in place ever since modern health service was introduced in the country; initiatives taken in the 1980s for opening public pharmacies in hospitals by MOH, the Addis Ababa City Council's move to open Urban Dwellers Association's pharmacies and those operated by the Ethiopian Red Cross Society; were attempts to curb cost escalations as well as generate funds for the maintenance, improvement and expansion of health care provision (3, 4).

However, lack of vigorous policy, serious commitment and good governance didn't allow the health services to benefit from the additional money generated as money collected was plugged back to the central government revenue, instead of being used to improve the situation in the area where the money was generated. Though recent changes that allow the money collected to be used as a revolving fund by health institutions has made some improvements in the availability of funds and created motivation of work; it did not significantly change the perpetual level of scarcity of resources in the health sector. As a result, the public health services at all levels were left with meager health budget allocated by the central government which has proved to be highly inadequate. The constant lack of resources rendered the Ethiopian health service system constrained in terms of reaching majority of the population, and where available inadequately so, in all aspects of readiness for quality health care delivery and public health interventions. While availability of primary health care units has increased enabling wider geographic coverage; the problem of scarcity of resources still persists frustrating the cardinal policy of rendering equitable and quality universal health coverage that remains highly illusive causing serious concern among all stakeholders in health care.

The Global Conference of heads of state and Government and other prominent stakeholders duped: From Alma-Ata (1978) primary health care towards Astana, Kazakhstan (2018) SDGs and universal health coverage made profound commitments among which are the ones on advancing primary health care and better financing options (5). The conference acknowledged that inefficiencies and inequities that exposed people to financial hardship resulting from their use of health services need to be ameliorated by ensuring better allocation of resources for health, adequate financing of primary health care and appropriate reimbursement systems in order to improve access and achieve better health outcomes. It further ascertained that, it is necessary to continue work towards the financial sustainability, efficiency, and resilience of national health systems, appropriately allocating resources to PHC to realize the 1974 HFA declaration at Alma Ata, based on national context (6).

(**Elias Gebreegziabher Elias; Health financing in a poor country: problems and prospects, a PHD qualifying academic exercise, Western Pacific University, 1999.)*

Health Accounts:

The 2014 7th round national health account, reported in 2017 (7) is the best available published information that has made attempts to capture areas of expenditure related to public health in general and health care services in particular with analysis of efficiency aspects: i.e., allocation, operational and technical efficiency. The assessment revealed that:

- Total health expenditure (THE) accounted for 4.2% of the country's GDP, which is lower than the recommended 5% for low-income countries, and well below the global average of 9.2%.
- Share of total government expenditure on health was 8.1%, about a little more than half of what was agreed upon at the Abuja declaration (15%).
- Government health expenditure was only 1.4% of GDP, showing a level less than the average for low-income countries, which was reportedly 1.9% and the global average of 5.3% for 2017.
- Out-of-Pocket expenditure on health care was shown to be 31% of total health sector indicating a much higher level than the global average of 21%, and much more than the 20% landmark suggested by the WHO

Furthermore, proportion of Total Health Expenditure was: 32% Government, 35% External Funding and 31% Out-of-pocket (OOP); indicating high dependence on external sources which cannot be guaranteed to be sustainable and more often highly fluctuating; high OOP putting heavy financial burden on health care seekers, leading to further impoverishment of low-income families. This constant lack of resources rendered the Ethiopian health service system constrained in terms of reaching majority of the population, and where available inadequately so, in all aspects of readiness for quality health care delivery and public health interventions.
Apart from the NHA more detailed studies conducted on primary health care units (8,9) also showed allocation inefficiency in terms of proportions used for recurrent vs. capital; curative vs. disease prevention and health promotion; rural vs. urban; communicable vs. non communicable diseases, deficiencies, and injuries; while considering the demographic, climatic and associated epidemiological changes. The yearly incremental budget allocation over the years was neither commensurate with proclaimed double digit GDP growth nor with the population and cost explosion being witnessed in the country; to maintain available poor-quality services leave alone to improve equity, quality and cope up with newly emerging/increasing health problems that need additional attention.

Expenditure on drugs is also another aspect that indicates serious shortage. A 2007 study on total expenditure on drugs in Ethiopia was only at 45% when compared to the average per capita drug expenditure in low-income countries. When the total expenditure on drugs is broken down by source of expenditure: 47% was out-of-pocket by patients, 27% by external donors, 16% by NGOs and only the remaining 10% by Federal and local government allocations; reflecting high dependence on external and internal donors.

Health sector reviews *conducted* over the years have repeatedly shown that government health spending is very low, mainly relying on out-of-pocket expenditure and heavily depending on unpredictable and not well harmonized external donations**. It was with this understanding that the USAID supported 'Health finance and Governance (HFG) and Health Care Financing Reform (HCFR) project (2013-2018)' was launched and implemented (10). This was part of an international effort attempted in more than 40 countries whose focus was: to protect families from catastrophic health care costs, expand access to priority services, and ensure equitable population coverage. Strategies developed to achieve these lofty objectives included: increase domestic resources for health; manage those precious resources more effectively and efficiently; make wise purchasing decisions and develop robust health system governance to ensure that financial investments for health achieve their intended results.

Accordingly, Ethiopia's HFG and HCFR project comprised of strategies that included:

- Revenue retention and utilization that allows public health facilities to use their fees collected and drug sale incomes.
- Facility good governance that envisages instituting governing bodies in hospitals and health centers where community members are engaged to provide direction and over sight.
- Establishment of private wings in public hospitals that allows generating revenue form higher fees from patients who are able and willing to pay for it.
- Systematizing the existing fee waiver system and standardizing exempted services along with identification and certification of those truly eligible.
- Expanding the piloted Community Based Health Insurance (CBHI) and launching of the Social Health Insurance (SHI) for all employees of the formal sector; and
- Outsourcing of non-clinical services by public hospitals such as laundry, security, and catering services.

End – of – project reviews of HFG and HCFR (11) implementation have been commendable in many aspects including putting in place of planned governance structures and guidelines which have gone operational in significant number of health facilities, health service utilization has increased where CBHI have been implemented (174 Woredas) and evidence of improved governance of health services and acceptance of health insurance schemes were noted. However, efforts made so far could only support health services with marginal incremental resource allocation; and not geared towards determining actual needs for desired level of health care in equitable scope, quality, and scale. The main concern has been how much of the recent claims on improved health care financing are evident on the ground. And how much does it go along with daily expressions of health care users' satisfaction at all levels – specially related to availability of drugs, medical equipment and supplies, courtesy and ethical considerations, satisfaction of health care providers etc. These and other related issues are relevant for analytical discussion, conclusions, and formation of recommendations for action.

Several reviews, including those within the FMOH (12) clearly show that there are plenty of lofty ideas and plans for health development in Ethiopia, but implementation of policies, plans and guidelines is still a major challenge. Health facilities, especially those in rural areas, still suffer from scares resources with constant lack of diagnostic equipment; drug shortages; means of transport and non-operating vehicles where available (due to lack of fuel, maintenance, driver); and dilapidated facilities in need of major repairs; lack of electric power, basic sanitation, and water supply. Evidently these situations led government health services to be of low quality, low rate of utilization, and less meaningful public health activities.
The situation has been exacerbated by the proliferation of not well regulated and supervised private medical services (13), illicit practitioners (be it traditional or pseudo-modern) as drug vendors and injectors to further rip-off health care seekers.

FMOH Planned interventions to improve the situation:
Measures envisaged to be implemented in the coming fourteen years have been outlined in the HSTP-II (2020-2035) (14) which include but not limited to:

- Mobilization of adequate, innovative, and sustainable financing; that includes raising the health budget share in the total government budget allocation; as well as increasing domestic resource mobilization aimed at development of sustainable financing mechanisms.
- Improve fairness and equity of health financing to reduce Out-of-Pocket expenditure through measures like the rapid roll-out of the CBHI and start social health insurance for the formal sector.
- Improve the efficiency and effectiveness of the health delivery system.
- Significantly increase role of the private sector in the provision of health services and strengthen public - private partnership.

The above listed are important interventions that need full attention and commitment by all concerned for its realization sooner than the fifteen years margin, if Ethiopia is to get close to its goal of UHC by 2030 in the area of health care financing (15). It is therefore highly recommended that more urgent actions be taken in the immediate and mid-term period to:

- Ensure that health resource allocations are equitably distributed among the regional states; be geared more towards health promotion and disease prevention activities and to those health services in rural communities.
- Make genuine efforts to curb resource mismanagement and corruption aimed at improving utilization efficiency, including rational staffing.
- Accelerate expansion of health financing schemes already tried out and proved useful to expand them country wide (fee retention, CBHI, SHI).
- Seek additional measures among alternatives that are appropriate for Ethiopia. It is evident that the experience with the private sector is highly lucrative, that of the NGO's shows to be sustainable, but the fee collection for government health services has been very low recovering only about 16% of government spending. This may require revision of the fee structure and the fee exemption policy with consideration of introducing the sliding scale fee payment based on estimated level of income rather than the current practice of no fee as certified by local administrative authority, which is subjective and open for misuse.

(***Amarech Guda, Challenges of healthcare financing: Economic and welfare effects of user fees in urban Ethiopia. Thesis Submitted to the School of Graduate Studies of Addis Ababa University, July 2007.)*

- Make use of other income generating ways/activities through community engagement to finance specific health projects/programs.
- Investigate means of strengthening government-NGO-private collaboration and partnership for resource sharing and curbing health care cost explosion.

Concluding remarks and suggestions:

While all the above-mentioned bits and pieces of measures will contribute towards ameliorating the critical resource inadequacies to a certain extent, nothing less than a drastic action will ever resolve all issues of concern in the health sector during the immediate future. However, it is needed to take long-term measures to sustain viability, among which the following are included:

- Serious and sustained advocacy work including active community engagement to raise questions and demands on creating common understanding and acceptance of the fact that health is a fundamental human right, as well as basic input for providing healthy and productive society for accelerated and sustainable human development; towards which all policies, plans and associated commitments be assured for its realization.
- Cognizant of the above assertion, comprehensive list of services, required inputs, health promotion, prevention, curative, and rehabilitation functions be identified for each level of service and appropriate costing be projected to firstly bring it to acceptable operational level for a start; and then proceed to estimate required maintenance and developmental budget say for the next five years. This should be based on costing from zero level and then the required actual amount may be calculated by deducting currently available/guaranteed inputs. can
- Once the costing is done and the amount is known, a rigorous fund-raising campaign at national and international levels should be launched like the experience we have for major national projects like the GERD, public parks, and tourism attractions, natural and human made emergency crisis rehab efforts, etc. The fund can be used as a startup infusion to equitable quality health care provision to a good standard of operation, along with preparation of duty conscious, dedicated and compassionate health work force.
    - At the same time a bold move of declaring obligatory national health insurance, through appropriate legal means at affordable payment scale for the majority. Ways and means of proper exemptions and filling the gap from public resources at local woreda and regional levels may be built into the system. Those assessed to be below the national poverty line need to be exempted. If this is done and the funds are managed efficiently, shortcomings of the health sector can be minimized drastically. The startup fund with government budget allocation and local inputs from regional and woreda governing bodies will carry the health sector cost burden, while the national health insurance system is up and running during the 3–5-year period. The currently introduced CBHI and SHI schemes should serve as springboards for the initiation of the ENHIS (Ethiopian National Health Insurance System).
    - A basic comprehensive health care pattern like the essential health care package (which also needs further scrutiny and rationalization) for each level of care that should be made available and accessible to all; along with development and deployment of well-defined cadre of health workers with clearly stipulated duties and responsibilities both in technical and ethical aspects. The inputs necessary for such well-planned health sector performance should be committed and readily made available be it by the insurance system, when it is ripe or by budgetary allocation shared between federal and local authorities and not be left to the changing convictions, moods, and desires of those in power at all decision-making levels. It is hoped that the current highly respectable movement well noted for its declared principles of evolving democratic governance and leadership committed to human rights, including at individual level will heed the call and can take up this challenge of accelerated change in the health care financing and governance system.

Regions need to conduct assessments in their specific areas to get a more in-depth understanding of the underlying causes of specific deficiencies and inform decision making, to improve the performance of the sector. The National Medicine Policy (NMP) designed to guide developments in pharmaceutical sector was launched before two decades and currently the revised version has not been endorsed and made available. The major health financing source including medicines' financing remains to be households.

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Observations on the pharmaceutical sector practices in Ethiopia

Tesfaye Shiferaw, BSc, MPH, Dr.PH.

Background

Despite the prevailing awareness of the challenges related to the pharmaceutical sector, including the procurement & inventory practices, availability of essential medicines at points of service delivery, and pricing factors, there is limited study at both national & decentralized levels in Ethiopia.

A well-functioning health system ensures access to essential medicines, and related products of assured quality, safety, efficacy, and cost effectiveness. The pharmaceutical sector, as part of the health system, is expected to fulfil those demands. In Ethiopia, it is widely perceived that essential medicines' availability is challenged by stock outs, inadequate budget allocation, low quality, and prohibitive prices.

A review of policies, strategies, guidelines, and relevant local and international studies selected based on internet browsing in Google and Google Scholar using key words: Pharmaceutical sector, essential medicines, availability, rational use, procurement & inventory pricatices in Ethiopia was undertaken in August 2020 . Relevant articles/reports were further selected based on free download .

The Federal Ministry of Health (FMOH) guides the country's pharmaceutical regulatory & supply functions through EFDA (Ethiopia food & drug administration) and PFSA (pharmaceutical fund & supply agency). EFDA is mandated to regulate food and drugs, while PFSA is mandated to assure uninterrupted supply of pharmaceuticals to the public at an affordable price (1).

At the official opening address of participants at the GSI health care conference (2), EFDA (formerly FMHACA) representative stated several challenges with the pharmaceutical services in Ethiopia that were negatively affecting patient safety. Specifically mentioned were inefficiencies in procurement, lack of product visibility in supply chain, that supply cannot keep up with demand, presence of counterfeit medicines, illegal trade, weak border control to secure supply chain, limited number of verification capabilities (such as laboratories and technological solutions), and waste and expiry.

Access to health care, which includes access to essential medicines, is part of the fulfilment of the fundamental human right to health. Essential medicines save lives and improve health when they are available, affordable, of assured quality and effectively used.

Essential medicines are those that satisfy the priority health care needs of most of the population and offer a cost-effective solution to problems of drug shortage in health systems of developing countries (3). They are selected according to the prevalence of diseases, safety, effectiveness, affordability, and quality in appropriate dosage forms. Countries indicate the availability & affordability of essential medicines in their national drugs policy objectives. To achieve the objectives, nations identify and publish essential medines list. The WHO recommends at least 80% availability of essential medicines in health care facilities (4). The Ethiopia National medicines policy aims to ensure provision of medicines with prices compatible with people's purchasing power (5). According to the WHO ideal drug prescribing indicator, 100% of drugs prescribed should be from the essential drugs list (6).

The expenditures for drug purchases through appropriate selection and procurement techniques must be optimized, to ensure availability of essential medicines at healthcare facilities (7). Even though most countries publish essential medicines list, the availability of medicines at public-health facilities remains far from desired. According to the performance assessment of the Ethiopia HTSP I key indicators report, only 48% of PHC facilities in Ethiopia had essential medicines (8). Prescribers can treat their patients in a more rational way if they have access to essential medicines list and such are available without interrupted supply at facilities (9). Mind usage of an, (one/singular) and the definitive article, "the"

Materials and Methods

With reference to the national strategy and plan of action for pharmaceutical manufacturing development in Ethiopia (2015 -2025) (10), we reviewed the national policies and institutions relevant to the pharmaceutical sector. The National Medicine Policy was launched in 1993 , with the aim of providing universal access to good-quality essential medicines. The Policy had implementation instruments developed subsequently. However, it has not been updated to reflect the current priorities and developments of the country. There is an essential medicines list in Ethiopia (EML 2020, now 6th version), with over 350 unique formulations . However, there is no separate essential medicines list for specific categories e.g., paediatrics. The EML is being used in health facilities, for public procurement, budgeting, and insurance reimbursements (11).

The development of the Ethiopian local pharmaceuticals manufacturing sub-sector has been very much limited in terms of production capacity, technology acquisition, creation of employment opportunity and investment . Most local manufacturers are not compliant with international good manufacturing practices (GMP), and no product has been prequalified by WHO. The manufacturers operate below capacity and supply only about 20% of the local demand (ref.). Local manufacturers have limited product portfolios and are estimated to supply about ninety of the more than 350 products on the national essential medicines list. Many factors have contributed to the under-development of the local pharmaceutical manufacturing sector. One of the most significant gaps has been lack of sectoral long-term vision that is in line with the country's ambitious goal of economic and social development.

The Industrial Development Strategy (2013–2025) calls for the upgrading and promotion of the pharmaceutical sector with technology transfer and technology diffusion among its objectives . The government has been actively facilitating foreign direct investment through its investment policy. However, the country has not yet acceded to the World Trade Organization. Of particular importance is the food, beverage and pharmaceuticals industry development industry (FBPIDI), established by the government in 2013 with the objective to transform the development of food, beverage and pharmaceutical industries through accelerated technological development and transfer by providing the industries comprehensive, knowledge-based, innovative, and accessible support and to make them internationally competitive so that they have a significant contribution towards import substitution as well as exports in terms of variety of goods and volume .

The third joint FMOH, FMHACA and WHO national pharmaceutical sector assessment of 2017 was reviewed (12). The WHO recommends that indicator-based assessment and monitoring of the pharmaceutical sector must be made every four years to document meaningful changes. Ethiopia conducted its assessments in 2003, 2010 and 2017 . The objectives were to assess and monitor the impact of policies, strategies, regulation, and activities towards improving access to safe, effective, and quality essential medicines, affordability and their rational use using WHO indicators. The conclusion and recommendations made from the three surveys showed that most the parameters measured were sub-optimal .

Regions need to conduct assessments in their specific areas to get a more in-depth understanding of the underlying causes of specific deficiencies and inform decision making, to improve the performance of the sector. The National Medicine Policy (NMP) designed to guide developments in pharmaceutical sector was launched before two decades and currently the revised version has not been endorsed and made available. The major health financing source including medicines' financing remains to be households.

A total of more than two thousand products have been approved by EFDA to be marketed in Ethiopia and the list of registered products is posted on its website . However, the authority does not have a fully computerized registration system and as a result, timely updating of the list proved to be difficult. Furthermore, the efficiency of product registration process is reported to be delayed.

Public sector procurement is pooled at the national level and PFSA at Federal Ministry of Health is responsible for public sector medicines procurement and distribution.

There have been calls for effective cost analysis as well as proper inventory control management which would help to identify opportunities for cost savings and improve efficiencies for the pharmaceutical system. To that effect, a study was conducted in Saint Paul Hospital Millennium Medical College (SPHMMC) in Addis Ababa to analyse pharmaceutical expenditure and assess inventory management practices (13). SPHMMC allocated ETB 12. 9 million (9.4%), twenty-four million (13.2%) and 31. 4 million (9.04%) for pharmaceuticals from its budget for the years 2013/14, 2014/15 and 2015/16, respectively (refs.). However, 45.3 million, 49.2 million and 79.0 million ETB were used to purchase pharmaceuticals for the fiscal years 2013/14, 2014/15 and 2015/16 respectively. In the year 2015/16, the share of medical supplies, medicines and laboratory reagents were 45%, 28% and 27% respectively. Inadequate storage space, lack of adequate supply of pharmaceuticals and provision of new and near to expiry pharmaceuticals were identified to be the major challenges in inventory management leading to stock-outs and expiry of pharmaceuticals.

Deficient performance of inventory control management was indicated in the hospital with arbitrary decisions on quantity and frequency of ordering leading to frequent stockout and expiry of pharmaceuticals indicating a need for follow-up actionsto curb the challenges and hence, efficient use of limited resources.

A study was conducted to assess situation of the pharmaceutical logistical system in twenty-four health centres (HCs) in Addis Ababa (14). Most of the HCs (95.8%) made use of the essential drug list (EDL). The HCs determined their own drugs resupply quantity, majority of them using standard formula. On average, only 47.52% of the HCs received the full quantity of drugs they ordered from PFSA. The availability of ordered drugs from program source was 85.4%. Adequacy of storage condition was 71.8%. Majority of the drugs had bin cards, and the accuracy in keeping stock records was < 10%. In twelve out of 22 HCs, not all personnel involved in handling of medicines' waste were aware of the potential risks of hazardous medicines and 11(45.8%) of the HCs usually stored medicine wastes for 6 to 12 months. From the in-depth interviews, key informants (KIs) agreed that the strength of district management determined the practice of selection. All the KIs related barriers of forecasting and procurement with the services at PFSA. All KIs agreed that budget was determinant on availability of drugs, while the limited capacity of PFSA reported to contribute to the stock outs in HCs. In conclusion, there was no major problem common to all HC's regarding drug selection. Inadequate supply of NPDs at PFSA was a major obstacle for the overall logistics system. Transportation of NPDs and infrastructures related to medicine waste management were not adequate. Therefore, PFSA should enhance its capacity in all aspects. HCs' management should support HCs' pharmacy, and stakeholders should construct standard stores and medicine waste disposal sites.

Availability of EMs and Inventory management practices in primary public health facilities of Gondar Town, NW Ethiopia was assessed (15). The average availability of essential medicines in the public health centres was satisfactory. However, the health centres had stock out for substantial number of essential medicines over the six months period. There was also wastage of drugs and discrepancy of record balance with the physical count in many of health facilities. Health facilities should perform proper and consistent inventory management practice. Long duration of stock out for essential medicines should be improved.

Sado and Sufa (16) conducted a study aimed at assessing access to EMs for children based on availability, affordability, and pricein Western Ethiopia (Wolega). It was found that the average availability of essential medicines was 43 % at public and 42.8 % at private facilities. But the unavailability of EMs offered free of charge from public sector was a pressing problem. Medicines were sold at higher price of IRPs and were unaffordable for people with low income in both public and private sectors. The findings of that study suggested that access to EMs to children was hampered by low availability and high price (unaffordable). Those EMs were sold at the median of 1.18 and 1.54 times their IRPs in the public and private health facilities, respectively. A patient needed to pay 36% times higher in the private than in the public health centres. In general, medicines were high priced for the treatment of common sicknesses prevalent in the community. The price of medicines was so high that it consumed the whole of a day's earning for the low paid unskilled worker.

A study was conducted in Dessie (NE Ethiopia) on the availability of Tracer Drugs and Implementation of their logistic management information system in public health facilities (17). Tracer drugs (TDs) are the representative of essential medicines and satisfy the priority healthcare needs of the population. Managing tracer drugs through logistics management information systems is a strategy to enhance their smooth flow for continuous provision of quality health service. Twelve tracer drugs were managed by health facilities. The overall mean availability, mean duration, and average frequency of **stock out** of tracer drugs (last 6 months) were 74.7%, 48.8 days, and 1.43, respectively. In eight health facilities, logistic records were available, but all health facilities did not use stock cards. Also, three out of nine used the health commodity management information system. On average, 77.8% of the tracer drugs had bin cards, of which, 86% were updated. The discrepancy between physical count and stock keeping records ranged from 0% to 100%. The causes of stock out were inadequate supply, lack of record forms, and their inconsistent use. The availability of tracer drugs was less than the recommended amount, and inadequate supply, poor availability and use of record forms were the reasons for stock out. Thus, health facility managers and pharmacists should work in harmony to ensure uninterrupted supply and implement a logistic management information system.

The country's health sector financing has a direct relationship with the availability of essential drugs (18). The sector is underfinanced by both global and regional standards and is hugely dependent on donors and direct payment by households - contributing to about 40% and 37% of the national health expenditure, respectively. As an essential component of health care, drug financing is no exception, with households' out-of-pocket expenditure accounting for 47% of the total drug expenditure. The country's expenditure on drugs had been increasing by an average of around 28% annually. The per capita government expenditure on drugs was only thirty-two birr or US $3.80 in 2005-2006 which is 45% of the average per capita for low-income countries at the time. The fee waiver system did not safeguard patients against having to pay for medicines because of the unavailability of drugs in public health facilities. The reliance of the financing system on tax revenues, donor financing, and households' out-of-pocket expenditure have proven to be unsustainable. Thus, the MOH has initiated insurance schemes to pool financial resources the results of which is yet to be determined.

Key issues /fundamental issues

Underfinancing of the health sector & lack of a well-functioning supply chain management system for pharmaceuticals appear serious issues associated with the low availability, stock outs and unaffordability of essential medicines in the country.

Access to essential medicines is contingent up on well-functioning supply chain systems that move drugs from the manufacturer through to end use. Supply chain management in the health system has received increasing attention in recent years - as both a priority and a challenge - as FMOH/PFSA appears to deliver an increasing number of products. With the recent years' relative increases in financing for health and with much of this new funding earmarked for combating priority diseases and less for health system strengthening, PFSA/MOH is now in charge of delivering a larger number and volume of products yet are given limited additional resources for investments in supply chain improvements.

Despite institutional arrangements (e.g., PFSA), and progressively increasing investments in procurement of essential medicines &products, their availability at health facilities remains chronically inadequate or low.

The health sector is underfinanced by global and regional standards and is dependent on external partners and direct payment by households, contributing to about 40% and 37% of the national health expenditure, respectively.The per capita government expenditure on drugs is low (was USD 3.80 in 2005-2006 that is 45% of the average per capita for low-income countries) at the time. The existing fee waiver system has been reported not to be safeguarding patients against having to pay forit.

Few studies in the sector have been generic and are at national level providing limited information on the situation at the decentralized local levels.

Suggestions for improvement

- The periodical joint FMOH, FMHACA and WHO national pharmaceutical sector assessments provide data at national level. Sub-national studies should be conducted to provide a more in-depth understanding of the underlying causes of specific challenges and inform decision making, to improve the performance of the sector
- There have been three NHAs (national health account studies) in FMOH, the coverage of which superficially included the pharmaceutical sector. It is suggested for the upcoming NHAs to include the sector in the analysis to establish database for drug financing situation in the country.
- A comprehensive national Health financing reform is required to better inform budget allocation in view of demographic, epidemiologic, environmental transitions, and changes in market forces.
- Policy interventions are required to strengthen procurement and inventory management at national and sub-national levels, including the launching of the revised National medicines policy
- Enhance capabilities of local manufacturers with investment opportunities, technology transfer mechanisms, tax incentives, markets, etc

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Overall Conclusions and Suggestions

Ethiopia faces several challenges in its health services. Despite the positive efforts of the government, the Ethiopian health system is reported to be performing sub-optimally against the emerging transitions: demographical, epidemiological, environmental; and growing health literacy with rising demands. The individual and population level demands for quality and equitable health care have been markedly rising. Regrettably, against the ever-increasing quest for more resources (financial, staff etc.), there has been low productivity and inefficiencies in the system. Since the health system is beyond the health sector, the roles of citizens and civil society (private, NGOs) must be cultivated to provide resilient services.

Medicines and related products in the health system have received increasing attention in recent years. With the recent years' relative increase in financing for health and with much of this new funding earmarked for preventing priority diseases and less for health system strengthening, PFSA/MOH is now in charge of delivering a larger number and volume of products yet are given relatively limited additional resources for investments in supply chain improvements. Despite institutional arrangements, and progressively increasing investments in procurement of essential medicines & products, their availability at health facilities remains chronically inadequate or low.

The papers reflected that sound national health policies, strategies and plans being abound, but their realization is thin on the ground. Several challenges have been stated, including limited resources, weak governance and leadership at various levels, limited community engagement, uneven non-state actors' participation and procurement & logistical difficulties. The dire state of affairs vividly transpires in the relatively low level of satisfaction of users across the board. On the other hand, there are exemplary situations, whereby better results have been registered where effective governance & leadership is in place, when stakeholders have jointly focused, planned and implemented activities - with adequate human capacity, financial resources and organized interactions among different entities.

It is our wish to see the Ethiopian health system fit for the 21st century so that it is able to meet the goals of improving the population's health status, responsiveness to expectations of the citizens and protect from financial hardship. To enable the realization of the goals, a progressive health policy, quality management, infrastructure development and relevant social accountability mechanisms should be in place.

Specifically, the below are cardinal suggestions emanating from the papers, for serious consideration and appropriate action:

- An urgent review of the health sector governance and leadership at all levels by independent, multi-sectoral and professional body to determine the existence and functionality of strategic policy frameworks that possess effective oversight, meaningful stakeholders' participation, regulatory functions, ensures systems design and accountability mechanisms.
- Critical review and course adjustment of the functionality and the professional/technical merit of relations of the current decentralized structure of Regional Health Bureaus and the Woreda Health Offices vis-a-vis the Federal Ministry of Health.
- Woreda Health Offices and other PHCU structures need to be mandated and committed to facilitate the participation and empowerment of the sector's stakeholders to own plans and modalities of implementation of health care in their administrative areas of responsibility.
- Considering issues of equity in health and the trans-boundary nature of disease occurrences; the functionality and the technical merit of relations of the current decentralized structure of Regional Health Bureaus, the Woreda Health Offices, PHCU health facilities and other health care facilities vis-a-vis the Federal Ministry of Health need to be revisited and appropriately redefined to allow proper linkage, guidance, supportive supervision; and accountability on duty performance and accrued results.
- Strengthen the HEP ensuring the comprehensiveness of the Essential Health Service Package ensuring progress towards universal health coverage; thereby enabling individuals and communities to take appropriate actions for health promotion; and maintain easy access to adequate preventive, curative and rehabilitative care

without any compromise. It also needs to be strengthened through frequent supportive supervision and continuing in-service education opportunities.

- Regulatory capacity for safety and quality needs to be strengthened to ensure the adherence to the implementation of standards at all levels of care, including the essential health service package.
- Strengthen HRH Governance & Leadership **by** improving the institutional arrangement, technical and leadership capacity at all levels, including that of the HRH Directorate at FMOH.
- The extreme shortfall in the population to health worker ratio demands careful planning in the number and mix of categories to be trained and deployed based on the current and evidence-based future projection needs of the health sector. The relatively neglected areas of developing and deploying well-trained public health professionals should be given proper attention as core input for
- improved public health services, as well as governance and leadership roles. In this regard, the need for strengthening and expansion of existing training institutions; and establishment of Schools of Public health par excellence that cover critical areas of specialties, well distributed in the country for community-based practice additionally allowing for exposure to socio-cultural diversities.
- With regard to challenges in the pharmaceutical sector: strengthen procurement and inventory management at national and sub-national levels, including the launching of the revised National medicines policy with relevant implementation mechanisms; and enhance capabilities of local manufacturers with measures like investment opportunities, technology transfer, market studies and tax incentives, along with proper assessment on current situation to establish evidence based national data.
- On the pharmaceutical supply side, the growing numbers of local manufacturers need to be motivated to comply with GMP requirements through proper certification. The need to revise the existing NDP in light of current developments seems priority. In addition to the periodical (4-5 yrs.) joint national sector surveys, intermediary sub-regional studies could generate timely information for the sector.
- Inadequacy of resources which comes down basically to serious shortage of financial resources is an overarching challenge concluded in all papers in this publication. Hence, appropriate costing of actual needs at all levels of health service units and administrative structures should be conducted to establish actual requirements. Once the amount is known, a rigorous fund-raising campaign at national and international levels should be conducted to collect funds that can be used as a start-up to allow more equitable quality health care provision, along with preparation of duty conscious, dedicated and compassionate health work force. At the same time a take bold move of proclaiming obligatory national health insurance, at affordable payment scale for the majority with in-built mechanism of proper exemptions for the needy.

Annex-1

The images in the logo shown above were used at the time including on student badges, and were meant to represent health officers (snake and torch); community nurses (red cross); sanitarians (hand water pump) and Medical Laboratory Technicians microscope) covered with palm branches to depict healthy and peaceful development**.**

All the authors are products of the then HSIU, Gondar Public Health College and Training Center who graduated as health officers' between1957-1975.

The authors after one of their working sessions

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Elias completed his secondary level education at the then General Wingate Secondary School in 1964. He then joined the HISU, Public Health College & Training Centre at Gondar and graduated in 1968 as a health officer earning the degree of B.Sc. (Public Health) with distinction. Among the many educational opportunities attended the main courses included: Master of Public Health (major IEC/BCC, 1972); Post-Graduate Diploma in Project Planning and Appraisal (1981); Post-Graduate Certificate in health sector reform - with emphasis on planning, financing, monitoring and evaluation (1988) and Food and Nutrition Planning (1989).

His work experiences included: A total of 26 years professional public health service at different levels of responsibility as Government employee in Ethiopia and about 14 years of public health and related services at international level to United Nations agencies in several locations; and as a senior private consultant in health development issues, programs, and projects for different national and international organizations for more than 12 years.

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Over forty years working in Public Health, Planning and Management within Government and Non-Government settings in Ethiopia, provides a depth of experience, reaching across policy, strategy, service delivery and research. This is rooted in extensive experience in clinical service and hospital management during the first 25 years of his career, during which time he also obtained his master's degree in Epidemiology from Tulane University, USA. With

this wealth of experience and academic achievement, Dr Tesfaye then held senior technical and management roles in 2 successive US Government flagship family health development programs in Ethiopia, from 2000 to 2017. For the last four years he held the position of Technical Director and Deputy Chief of Party of the Integrated Family Health Program (IFHP).

Skilled in policy analysis and program design, management, monitoring and evaluation he always uses the best evidence available to inform his work. Across these areas, he brings his valuable strengths in leadership, influencing, communication and ability to bring people together to address shared issues.

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Born in Jimma Ethiopia, Dr. Tewabech Bishaw is a passionate Public Health Specialist with over 40 years of sub-national, national, and global work in public health leadership, program design, management, strategy and policy development, human resources development advocacy and institutional and community capacity strengthening. Her career began as a schoolteacher and trained in public health at the Gondar Public Health College in Ethiopia and at Loma Linda University School of Health in USA, she joined the Ministry of Health where she served in different executive management and leadership capacities. Subsequently. she worked with UNICEF in Ethiopia, India, Namibia, and Botswana for over two decades and made significant contribution on various health programs including maternal and child health, HIV/AIDS, human resources development and child and adolescent protection.

Dr. Tewabech is one of the founders and two-time president of the Ethiopian Public Health Association, a founding member of Ethiopian Women in Science, and founding member and current Secretary General of the African Federation of Public Health Associations.

She founded and served as the Managing Director of Alliance for Brain-Gain and Innovative Development (ABIDE), a pioneering Ethiopian NGO facilitating Diaspora engagement for knowledge exchange and technology transfer. Dr. Tewabech served as member of the International Board of Directors for AMREF- Health Africa, and currently serve as a member of the WHO-AFRO Advisory Council on Health Research. She is an affiliate Assistant Prof. at Jimma University. Dr. Tewabech has obtained several awards for her excellent contributions, including Lifetime Achievement Award from Association of Ethiopian Women in Business, and a recognition as one of the top 100 Women Leaders in Global Public Health by the Global Health Program of the Graduate Institute, Geneva. Dr. Tewabech is an active human rights advocate, and a gender and culture sensitive social entrepreneur. She is a mother of two and grandmother of five children.

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An Ethiopian national who recently retired from UNICEF after having served the organization for several years in several countries in capacities including Health program officer, regional health advisor and Country representative.

Prior joining UNICEF, Tesfaye Shiferaw worked with the then Jimma Institute of Health Sciences (now Jimma university) in positions including teaching, coordination of research & development, head of the community health department and assistant dean of the academic affairs. During the time, he earned the rank of the associate professor of public health.

Tesfaye Shiferaw started his career as a public health officer managing district health offices, while progressively moved to lead the regional health department.

A graduate of the former HSIU, Gondar Public Health College & Training Center; he then completed postgraduate studies in Epidemiology and Public health from the Tulane University School of Public health & Tropical Medicine (USA) earning the MPH and Dr.PH.

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Tiruneh was born in 1941 in a rural village. He had no opportunity to attend school before the age of ten. After being brought to Addis Ababa by his aunt, he attended the then Asfa Wossen School commuting between Merkato and Kazanchis daily.

He attended grades 11 and 12 at the Menelik II secondary school from where he joined the Gonder Public Health College & Training Centre. After graduating as a Health Officer, he served at the Sawula Health Centre (1966-1968), studied at the University of California, Berkeley (1968-1969) and earned an MPH degree in Health Planning & Administration. There after he served as "chief of health centres and clinics" at the "ministry of public health" (1969-1972). This position gave him opportunities to visit/ supervise many heal th facilities throughout Ethiopia.

In 1972 he joined UNICEF as a "national professional officer" (1972-1978), responsible for UNICEF-Ethiopia cooperation in the health sector. He then worked as UNICEF "International Professional Officer in Ghana, Tanzania,

Bangladesh, Myanmar (Burma) and Uganda over a total of 20 years.

Within five years of his retirement, he has worked as short-term (about three months each) consultant in UNICEF Malawi, Bangladesh, South Africa, and India as well as for ILO and FMoH in Ethiopia.
After “early voluntary retirement” in 1999, Tiruneh returned home and lives in Addis Ababa giving himself the title of “enthusiast in public health and photography”.