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Welcome to the third volume of the International Institute for Primary Health Care-Ethiopia's (IPHC-E) Primary Health Care Digest! The purpose of the Digest is to share the latest news and research on primary health care from Ethiopia.

The Digest covers topics on Leadership Training Program for the health workforce in Ethiopia, update on the World Health Organization recommended new malaria vaccine, non-communicable diseases burden and treatment, and an update on testing of interventions (community-based hypertension screening and management) at Woreda Innovation Centers.



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Creating an Efficient, Cost-Effective and Sustainable Leadership Training Program for the Health Workforce in Ethiopia

Nurhan Tewfiq

Purpose

This policy brief analyzes the gaps in the existing leadership training programs and suggested possible solutions for more effective leadership training programs.

Background

The Health Sector Transformation Plan (HSTP I) was introduced by Ministry of Health Ethiopia as the Health chapter of Growth Transformation plan II (GTP II) and the first phase of the health sector's "Envisioning Ethiopia's path towards Universal Health Coverage through strengthening primary health care by 2035". Currently, the sector is implementing Health Sector Development and Investment Plan (HSDIP) (2023/24-2025/26) which is aligned with HSTP II with the overall objective of improving the health status of the population. In cognizant of that, HSTP II stated improving health leadership as one of its transformation agendas. It promotes to scale up health leadership capacity building programs, including the Leadership Management and Governance (LMG) training as one area of continuous professional development and Leadership Incubation Program for Health (LIP-H) as a strategy to prepare the future leaders of the health sector.(1, 2)

Despite several efforts to improve the leadership capacity of the sector, the evaluation result of the HSTP I highlighted critical leadership gaps, including the inadequate capacity to implement a decentralized health system, low utilization of health services, inadequate follow-up on the implementation of policies, guidelines, standards, and protocols, and inadequate coordination of public-private health sector partnerships. Following the HSTP I evaluation finding different additional leadership capacity building trainings has been developed like Leadership Incubation Program for Health (LIP-H), Primary health care Leadership Development Program (PLDP), Clinical Leadership Improvement Program (CLIP) and other program based leadership training programs which were derived from the national LMG programs start to expand. Even though the development of this leadership training programs brought some change, it didn't impact the health system elements as intended.(1,2)

Problem statement and analysis

The evaluation findings of the leadership training programs showed that there is fragmented implementation of leadership programs, absence of an institutionalization plan in designing leadership training, untailed training approaches and training manuals and weak coordination and follow-ups of the health leadership training programs. (3,4)

During an interview with the Ministry of Health (MoH) Continuous Professional Development (CPD) team, the team reported “All leadership training manuals except LMG, LIP-H and PLDP training manuals the remaining is not standardized and endorsed neither by the ministry of health CPD team nor by accredited CPD accreditors.” Noticing this problem the MoH CPD team developed national leadership competency framework, however, the document did not consider the evaluation findings of the existing leadership training programs and did not conduct needs assessment for different structural level.

The analysis of the training programs content shows that there is program specific leadership training programs; which is similar training under different program names such as nutrition, reproductive health or Expanded Program on Immunization (EPI). On top that, as reported by the MoH CPD team having a lot of leadership manuals which are not accredited means there will be duplication efforts and it is not cost effective since similar people may take the same content under different leadership training title.

The initiatives and efforts exerted at different levels have improved the health leadership capacity and clinical leadership practices. However, they did not bring the desired health leadership the ministry is aspiring to build a resilient health system to well address the increasing needs and demands of the population for improved health services.(1,3,4).

From the synthesis of the existing programs and research findings of the leadership training program showed the following gaps:

- Fragmented training program
- Program based trainings/ program specific
- Structural gap (segmentation in the ministry & partner organizations)
- Duplication of efforts
- Untailed (training competencies & program)

After exploring the problems in the existing leadership training programs in Ethiopia, these are the possible proposed solution by this memo.

- Prepare national competency framework tailored for every level
- Establishing consortium of leadership trainers and institutions
- Preparing national leadership directive
- Improve structural gap
- Develop a strategic guide which defines the national health leadership road map

Preparing leadership competency framework

“A leadership competency framework is a set of core competencies that are considered most vital to leadership success. Leadership competency frameworks are a valuable tool for organizations because they target how to nurture, develop, and grow the next generation of leaders.”(5)

Defining the leadership competency framework for the health sector will help the sector to have a guide to nurture future leaders who need guidance and direction. It set competencies needed for seasoned leaders who need to refine their capabilities. It gives direction on the competency areas for those who want to advance their career as a leader and it will also support the organization to recruit the right competency for the sector.(6, 7) Therefore, the MoH should consider conducting needs assessment for different structural level and define the competencies required for each level. It is important to have a tailored competency framework which includes the scope, competency and delivery mode for each level of the structure along the objective.

Establish consortium of leadership training institutions

To overcome the redundancy and inefficient use of resources, it is necessary to have consortium of leadership trainers and institution so that they have regular forum once or twice in a year to discuss on the problems and create learning platform. The consortium will also support on the health sector’s leadership platforms. This will create a platform to share experience of different leadership challenges which in turn brings better health outcome through better decision making skills & communications which increase cost effectiveness and efficiency of the training programs.

Improve structural Gap

Since every directorate prepares its own training there is redundancy of leadership training under different program title. There is institutional capacity building desk under the ministry, where the team identifies demands and prepares training for the staff. It will be good if common type of training including leadership capacity building training should be managed under one roof. Improving the structural gap and empowering the team will improve the existing gaps.

Develop a strategic guide which defines the road map

There should be a clear road map on the existing leadership training programs as well as what it will look like in the future. The road map should also answer where we want to go in 20 years in our leadership journey and how to sustain the training programs without external fund which includes detailed costing which leads to financial independence. If the road map includes what competencies are needed at all structural levels, it will answer the structural gaps which the sector has in leading the training programs. This in turn leads to getting answers for establishment of different similar programs which were unnecessary and resource intensive.

Conclusion

In order for the country to have a strong leadership training program that is sustainable, cost effective and tailored program, the ministry should take major actions to solve the structural gaps it has and the program should be led by one directorate. Being under one directorate alone is not satisfactory, however, that directorate should be given power to decide on the whether to start new programs or not when demand come from programs or partners. Once a dedicated directorate established that directorate/department should prepare a road map, directive, define the competencies needed for different levels and form a consortium which guides on what is needed for the sector. This will result in the desired change which is cost effectiveness, efficiency and a sustainable leadership training program.

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Update about the World Health Organization (WHO) recommended new malaria vaccine

Mohammed Abseno

Introduction

Malaria is one of the major public health problems affecting millions of people yearly especially in tropical and subtropical regions. Although malaria is a preventable disease, in 2021 alone, an estimated 247 million people were infected with the malaria parasite over 85 countries in the world with an estimated death of 600,000 people (1). The objective of this article is to increase awareness of the new malaria vaccine approved by the World Health Organization (WHO) for its use among children in the most endemic areas.

After many years of efforts to develop malaria vaccine, the World Health Organization (WHO) recommends the use of the second malaria vaccine called R21/Matrix-M for the prevention of malaria in children following the advice of the WHO Strategic Advisory Group of Experts (SAGE) on immunization and the Malaria Policy Advisory Group (2). The R21 vaccine is the second malaria vaccine prequalified by WHO, following RTS,S/AS01 vaccine which obtained prequalification status in July 2022. The approval of the two vaccines followed clinical trials for their effectiveness and safety (2).

RTS,S/AS01, which was the first effective malaria vaccine candidate to date, demonstrated 56 % efficacy over 12 month

in African children and therefore opened the need for a further effort to develop a more effective vaccine (3). A double-blind, randomized controlled, phase 2b trial, the low-dose circumsporozoite protein-based vaccine R21, with two different doses of adjuvant Matrix-M (MM), was given to children aged 5-17 months in Nanoro, Burkina Faso—a highly seasonal malaria transmission setting. Three vaccinations were administered intramuscularly at 4-week intervals before the malaria season, with a fourth dose 1 year later. Four hundred fifty children were enrolled in the study and divided into three groups. At 6-month primary efficacy analysis, 29% in group 1, 26% in group 2 and 71 % in group 3 developed clinical malaria. Vaccine efficacy was 74% and 77% in groups 1 and 2 respectively. At 1 year, vaccine efficacy remained high, at 77% in group 1.

The finding led to the conclusion that R21/MM appears safe and very immunogenic in African children, and showed promising high-level efficacy (3). Another study, which was a multicenter, double-blind, randomized, phase 3 trial was done by Mehreen S Dattoo and et. al. across five sites in four African countries with different malaria transmission intensities and seasonality.

The study participants were children aged 5–36 months who were screened and enrolled from April 26, 2021 to Jan 12, 2022. Findings demonstrated that there were no treatment related deaths. 12-month vaccine efficacy was 75% at the seasonal sites and 68% at the standard sites for time to first clinical malaria episode. Similarly, vaccine efficacy against multiple malaria episode was 75% at the seasonal sites and 67% at standard sites. The study concluded that the R21/Matrix-M was well tolerated and offered high efficacy against clinical malaria in African children. This low-cost, high-efficacy vaccine is already licensed by several African countries, and recently received a WHO policy recommendation and prequalification, offering large-scale supply to help reduce the great burden of malaria in Sub-Saharan Africa (4).

Status in Ethiopia

In Ethiopia, about 68% of the population (52 million) is at risk of contracting malaria, and *Plasmodium falciparum* and *vivax* are the main species, accounting for 60% and 40% of cases, respectively. Indoor Residual spraying (IRS), Insecticide-Treated Nets (ITNs), larval control, preventive chemotherapy, early diagnosis and treatment are the widely used preventive and therapeutic modalities (5). Although few studies regarding awareness, acceptance to malaria vaccine and willingness to pay for childhood malaria vaccine were encountered, we couldn't come across any document about future plan regarding introduction of the new WHO recommended malaria vaccine in the Expanded program for immunization.

Roll out of the new malaria vaccine

Eighteen million doses of the first malaria vaccine to become available will be allocated over 2 years across 12 African countries, including Benin, Democratic Republic of Congo, and Uganda, the World Health Organization recently announced. In addition, parts of Ghana, Kenya, and Malawi will continue receiving doses of the vaccine, known as RTS,S/AS01, which protects against *Plasmodium falciparum* malaria, after participating in a pilot program that illustrated the vaccine's safety and efficacy (6)

Recommendation

In Ethiopia, there must be efforts to introduce malaria vaccines, which involves pilot studies and further implementation actions.

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Non-communicable disease burden and treatment

Abigia Ashenafi

Introduction

Non-communicable diseases (NCD) are a significant but underappreciated source of mortality and morbidity, with over 41 million deaths each year worldwide and still on the rise. With 17 million people dying from NCDs before the age of 70, it has emerged as a prominent cause of premature death. Among these numbers, low and middle-income countries account for 77% of the deaths. Despite the fact that NCDs constitute a sizable set of diseases, four major ones account for over 80% of all premature NCD deaths. Cardiovascular disease takes the lead with 17.9 million people annually, followed by cancer (9.3 million), chronic respiratory diseases (4.1 million), and diabetes (2.0 million) (1). The four main risk factors of tobacco use, poor diet, harmful alcohol use, and physical inactivity are shared, which further strengthens them (1). When it comes to Ethiopia, non-communicable illnesses and injuries (NCDIs), which cause 44% of all annual deaths, have developed into a significant public issue. With a projected 65% of disability-adjusted life years (DALYs) attributed to NCDs by 2040, Ethiopia has seen one of the fastest increases in the worldwide burden of NCDs. (2)

Objectives

This review aims to determine the extent of the impact that non-communicable diseases (NCDs) have on Ethiopia's healthcare system and to evaluate the responses made to this increasing burden, particularly with reference to PHC settings.

Methods

We used search engines like Google Scholar and PubMed to find and examine current, published literature on NCD with a focus on PHC settings in Ethiopia.

Results

Numerous studies have revealed that NCD significantly affects the continent of Africa. They indicated that Sub-Saharan Africa (SSA) records adult mortality rates of over 50% and NCDs are the common cause of death. Furthermore, in the following ten years, its burden in SSA is predicted to rise by 27% (4). Despite this growing concern, public health efforts in many countries have only ever focused on communicable diseases (3).

Ethiopia is one of the countries least equipped to face this challenge (2). Similar to the majority of low-income nations, Ethiopia saw 711 fatalities per year per 100,000 persons due to NCDs (5).

According to estimates, NCD costs Ethiopia at least 1.1 billion dollars annually, or 1.8% of its gross domestic product. (3)

People with lower incomes and less education are disproportionately impacted by NCDs. The catastrophic level of medical expenses associated with NCDs are more likely to be faced by the poor than by the rich, and NCDs place a significant financial strain on households due to the high out-of-pocket costs for health and long-term care. (2) In order to attain UHC and reduce the prevalence of NCDs, primary healthcare (PHC) is essential. However, the majority of primary care institutions in less developed countries are not equipped to detect and treat NCDs. Primary care in highly developed health systems handles the majority of the care for NCDs. Compared to 85% of high-income countries, just 6% of low-income countries have the necessary equipment to provide six essential primary care services (6).

A research conducted in Ethiopia utilized information from the 2014 Ethiopia Service Provision Assessment Plus (ESPA+) and the 2016 and 2018 Service Availability and Readiness Assessment (SARA) surveys. The study included a thorough examination of 873 health facilities in 2014, 547 in 2016, and 632 in 2018. The findings revealed that the primary healthcare facilities were not the primary providers of services for chronic disease management, unlike referral hospitals, general hospitals, and primary hospitals. (7)

In Ethiopia, the availability of health services remains remarkably inadequate despite the increasing prevalence of non-communicable diseases (NCDs). Only 36%, 49%, 53%, and 9% of health facilities, excluding health posts, offered diagnosis and treatment for diabetes, cardiovascular illnesses, chronic respiratory diseases, and cervical cancer respectively, according to the 2018 SARA assessment. According to FMOH and EPHI (2018), the overall preparedness score for these services is quite low, ranging from 18% for the diagnosis and care of chronic respiratory diseases, to 51% for cervical cancer (8)

For the years 2013 through 2020, the WHO has created a worldwide action plan for the prevention and management of NCDs. One of the goals is to enable primary healthcare to recognize NCDs and treat them at any stage. Through people-centered primary healthcare and universal health coverage, the major goal is to improve and refocus health systems to target the prevention and control of non-communicable illnesses as well as the underlying social determinants. This is to be done by health promotion, prevention, early detection, treatment, and sustained management of people with or at risk for disease, which highlights the significance of universal health coverage, particularly through primary health care and social protection mechanisms (9).

Ethiopia's Solutions in Addressing this Challenge

As to the response of Ethiopia to this growing burden, the comeback has been unsatisfactory especially at policy level. Ethiopia's efforts for retaliation have been met with challenges like poor access for affordable health care, unavailability of diagnostics and medication, costs due to referral, long waiting appointments for diagnosis, delayed care due to traditional medicine usage, lack of clear guidelines, inaccessibility to health facilities with diagnostic facilities for some NCDs and the like. Out of pocket expenditures (OOP) were revealed to be 70% for NCD and 23% of the total OOP in Ethiopian households (3). It's no secret that trained health workers are crucial in delivering health education and conducting early detection, case management, and lifestyle interventions to manage NCDs in the community. In spite of this information, the role of Ethiopia's HEWs to deliver NCD services has remained limited (10)

Though there are many challenges, the response to NCDs has not been without some progress in Ethiopia. Community-Based Health Insurance (CBHI), healthcare service expansion, support from NGO and service integration have somehow alleviated some burden. In addition, 2019's strict regulations on cigarettes, alcohol, and food, along with the additional price on products that include saturated fat, sweetened beverages, and tobacco, will help reduce the demand for these items and support NCD initiatives financially (3).

By 2025, Ethiopia plans to reduce overall premature mortality from Non-Communicable Diseases by 25%. Hence forth, the government summarized necessary strategies within four priorities; - strengthening the national response through policy, governance, leadership and coordination, Health promotion and disease prevention targeting behavioral, infectious and environmental risk factors: Comprehensive and Integrated Screening, Diagnosis, Treatment, Care and Support for NCDs and their risk factors and Monitoring, evaluation and research. Strengthening national response includes NCD service activities at different levels of the health system. Health Extension Program (HEP) performs health promotion, education, preventive measures, and treatment support at the bottom of the hierarchy (11).

Conclusion

The prevention and control of NCDs in Ethiopia needs a great leap from its current advances. Ethiopia's successful PHC model in communicable diseases should also be applied in the settings of NCDs. Measurements such as resource allocation, policy practice, adequate training of health extension workers and other health workers, supporting health facilities to provide screening, diagnosis, treatment should be taken. Service integration with existing health services, mainly PHC should be tightly worked up on. Furthermore, NCD expenses should be well covered with in CBHI to reach low income communities. Intensive focus and attention should be given to alleviate and treat this growing burden.

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Testing of Interventions at Woreda Innovation Centers: Integrated community-based hypertension screening and management at Tiya site

Eskinder Wolka, Anteneh Zewdie

About Woreda Innovation Centers (WICs)

Based on evidences, despite the progress on the process of the Woreda transformation and efforts to strengthen primary health care (PHC) in Ethiopia, various challenges related to major pillars of PHC were documented so far. Moreover, the progress the country has made shows a high degree of variation amongst different districts (woredas). Most of the challenges emanate from lack of opportunities to test the effectiveness of interventions before scale up, and sub-optimal delivery capacity. Addressing these challenges will require a new way of doing business. In order to mitigate the above challenges and address major gaps, the International Institute for Primary Health Care-Ethiopia (IPHC-E) established Woreda Innovation Centers (WICs) where ambitious plans can be designed and implemented and where interventions and ideal service packages can be tested before scale up.

The Institute will test a well-designed set of ideal integrated interventions that are important for the implementation of the Primary Health Care approach before scale up. Strong monitoring, learning, and adaptation will be embedded in the implementation.

These WICs will try to address and demonstrate sets of health packages that will need to be implemented to achieve universal health coverage (UHC) by improving service delivery, multi-sectoral collaboration and community engagement by testing interventions in innovative manner.

Overview of Integrated community-based hypertension screening and management

As part of WICs activity, by realizing a rising burden of non-communicable diseases, the Institute considers in the merits of involving health extension workers (HEWs) and other community structures in prevention and control of hypertension through task shifting or task sharing in integrated manner. To this end, the Institute has started testing of community-based hypertension screening and management at Tiya Primary Health Care Unit (PHCU), Sodo Woreda, Guraghe Zone for the last two years. This pilot testing involves screening of hypertension by HEWs at urban communities under the catchment area of Tiya PHCUs.

Non-communicable diseases (NCDs) are responsible for high proportion of mortality and morbidity, globally, regardless of geographic location, size of population or stages of social and economic development. The global prevalence of NCDs is increasing, with the greatest burden occurring in developing countries, and it is projected to increase over the next decades. This increase reflects an epidemiological transition in developing countries from communicable disease to NCDs. Almost three quarters of all NCD deaths (28 million), and the majority of premature deaths (82%) occur in low- and middle-income countries (WHO, 2014).

Low- and middle-income countries (LMICs) are undergoing an epidemiological transition from predominantly infectious diseases, maternal and child-health conditions, and nutritional disorders to chronic non-communicable diseases such as diabetes and hypertension (Global Burden of Disease, 2016). The burden of hypertension is increasing in low- and middle-income countries including Ethiopia. Hypertension is increasingly common condition in LMICs that expose patients to increased risk of mortality and morbidity (Steyn K et al 2005). Prevalence of raised blood pressure (SBP > 140 and/or DBP > 90 mmHg) among Ethiopian adult population was 15.6%, with no difference by sex (EPHI, 2016).

According to Ethiopian steps survey on risk factors on NCDs, about 6 % of the study population did not meet WHO recommendations on physical activity for health. Individuals in rural areas were found to be more exposed to physical activity than urban residents.

With a rising burden of non-communicable disease, health-policy makers have deliberated the merits of delegating or moving certain tasks from physicians to other health-care professionals, through task shifting or task sharing (Sibbald B, et al, 2004).

The testing of integrated community-based hypertension screening and management was done in Tiya PHCU, Central Ethiopia from October 2022 to December 2023. Baseline study by using mixed methods design was conducted before the intervention. Based on the identified gaps, capacity building training was given to HEWs including blood pressure measurement. Age, sex, contact information and blood pressure screening result of all adult population in the catchment area was recorded by the HEWs. Participants who met the referral criteria were referred to the Health Center. Service integration at community outreach and health post, supportive supervision and local resource mobilization were considered during the intervention. Process documentation was done by qualitative study and document review.

As of December 2023, a total of 2251 people were screened at community and health post. Among the total screened, 99(4.4%) referred to Health Center because of the raised blood pressure and 43 (2%) diagnosed as confirmed cases and started treatment and follow up. Increased community awareness and health seeking behavior was documented. Strong referral linkage was created in the testing site.

In conclusion, Community-based integrated hypertension screening and referral is feasible at health post and community level by using health extension program and existing community engagement structures.

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Design and formatting: Dr. Nahom Frew

**Primary Health Care,
With out exception.**

✉ info@iphce.org

📍 **Bole sub-city, Woreda 1, H.no 2340**

🌐 www.iphce.org