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MINISTRY OF HEALTH-ETHIOPIA
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ITALIAN AGENCY FOR DEVELOPMENT COOPERATION

WORKSHOP PROCEEDINGS REPORT

The Double Burden of Diseases and Challenges on Service Provision and Integration in Ethiopia: Evidences Generated from Different Experiences

26-27th February 2020, Addis Ababa

• UNITE AGAINST NCDs •

ACKNOWLEDGMENTS

The Italian Agency for Development Cooperation (AICS) – Addis Ababa Office

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1. GLOSSARY OF ACRONYMS

AICS	Italian Agency for Development Cooperation
ART	Anti-Retroviral Therapy
AAU-CHS	Addis Ababa University, College of Health Sciences
BMI	Body Mass Index
BP	Blood Pressure
BSc	Bachelor of Science
CDs	Communicable Diseases
CMNN	Communicable Maternal Neonatal Nutritional
COPD	Chronic Obstructive Pulmonary Disease
CRDs	Chronic Respiratory Diseases
CSOs	Civil Society Organizations
CUAMM	Collegio Universitario Aspiranti Medici Missionari
CVDs	CardioVascular Diseases
DALY	Disability-Adjusted Life Year
DM	Diabetes Mellitus
DPCD	Disease Prevention and Control Directorate
DPHP	Disease Prevention and Health Promotion
EPHCCG	Ethiopian Primary Health Care Clinical Guideline
EPHI	Ethiopian Public Health Institute
ESPA+	Ethiopian Service Provision Assessment Survey Plus
ER	Emergency Room
EDHS	Ethiopian Demographic Health survey
FP	Family Planning
FHA	Family Health Approach
FHT	Family Health Team
FP	Family Physician
GBD	Global Burden of Diseases
GDP	Gross Domestic Product

HBV	Hepatitis B Virus
HC	Health Center
HCV	Hepatitis C Virus
HCF	Health Care Financing
HCWs	Health Community Workers
HEWs	Health Extension Workers
HHs	HouseHolds
HHA	Healthy Heart Africa
HIV/AIDS	Human Immunodeficiency Virus Infection/Acquired Immune Deficiency Syndrome
HP	Health Post
HPN	Hypertension
HR	Human Resource
HSTP	Health Sector Transformation Plan
IDD	Iodine Deficiency Disease
IRT	Integrated Refresher Training
KHC	Kazanchis Health Center
LSM	LifeStyle Modification
MA	Medical Assistant
MNCH	Maternal Neonatal Child Health
M&E	Monitoring and Evaluation
MoE	Ministry of Education
(F)MoH	(Federal) Ministry of Health of Ethiopia
NCCD	National Cancer Control Plan
NCDs	Non-Communicable Diseases
NCDIs	Non-Communicable Diseases and Injuries
NHA	National Health Accounts
NSAP	National Strategic Action Plan
ODA	Overseas Development Assistance
OPD	Out-Patient Department
PA	Palestinian Authority

PDAs	Personal Digital Assistants
PHC	Primary Health Care
RHBs	Regional Health Bureaus
RHD	Rheumatic Heart Disease
ROI	Return Of Investment
RTA	Road Traffic Accidents
RTSL	Resolve to Save Lives
SARA	Service Availability and Readiness. Assessment
SDGs	Sustainable Development Goals
SMSB	Sudan Medical Specialization Board
STDs	Sexually Transmitted Diseases
STEPS	Stepwise approach to Surveillance
TB	Tuberculosis
THET	Tropical Health and Education Trust
ToT	Trainer of Trainees
UHC	Universal Health Coverage
UHEP	Urban Health Extension Professional
UNCT	United Nations Country Team
UNRWA	United Nations Relief and Works Agency
WDA	Women Development Army
WHO	World Health Organization
WRA	Women in Reproductive Age
ZHO	Zonal Health Office

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3. FOREWORD / OPENING SPEECH

3.1 HE Dr. Lia Tadesse – Former State Minister of Health, now Minister of Health

Dear Distinguished Guests,
Ladies and Gentlemen!

It is my pleasure to be here today and make an opening speech on behalf of the Ministry of Health and myself on this very important occasion that deliberates about one of the areas of the health sector taking a huge toll in the public, namely non-communicable diseases (NCDs).

As you may know, Ethiopia has made significant progress on social development, including poverty reduction, with encouraging results on communicable disease control, improved nutrition, maternal and child health. The country is strongly committed to maintaining this progress towards Universal Health Coverage.

> *At the same time, all segments of the population in Ethiopia show signs of the epidemiological shift occurring in most African countries, with a fast-growing prevalence of NCD, which call for new and innovative public health strategies to* tackle *the double burden of diseases*.

In Ethiopia, there is evidence of an increasing burden of NCDs and their risk factors. A number of separate small-scale studies and the situational analysis conducted by the Federal Ministry of Health in 2015 (STEPS Survey) substantiate the above points. Accordingly, the Federal Ministry of Health developed a national strategic framework on the prevention and control of NCDs and their risk factors. The strategic framework recommended the development of a detailed National and sub-national Strategic Action Plan 2019-2025 (NSAP). The plan outlines detailed actions and interventions required for the prevention and control of the major NCDs, and their risk factors, which should receive due priority in Ethiopia. These are cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes and their shared risk factors including tobacco, physical inactivity, unhealthy diet, smoking, and excessive alcohol use, as well as *khat* consumption. Mental, neurological and substance abuse disorders, that make a large contribution to NCDs, are dealt separately in the National Mental Health Strategy.

Some of NCDs like cancer control have required a strategic action plan to guide the country on specific interventions. Improving access to cancer care and intensifying national screening program for cervical cancer is among the key national priority programs.

Ladies and Gentlemen,

Ethiopia identifies NCDs as major public health, development and economic challenges. Recognizing the problem, therefore, the country has been working aggressively to address NCDs and some progresses have been made in recent years. There are many reasons inherent to the improvement, among which sustained political commitment; healthcare reform with community empowerment and ownership through the Health Extension Program; emphasis in building resilient health system

through domestic health care financing reform and effective use of global funding mechanisms; and addressing equity in access to primary health services by ensuring the worse off are not left behind.

Just to highlight some major achievements made by our country: Ethiopia has developed and implemented a national strategic action plan for prevention and control of NCDs. Secondly, the Parliament has passed a bill dubbed '*Food and Medicine Administration Proclamation'* restricting smoking in all indoor workplaces, public places and public transports and prohibited alcohol promotion on broadcasting medias. Thirdly, Ethiopia launched the first ever car-free roads initiative in December 2018. This is a monthly exercise where selected roads are closed for traffic and open for physical activities including walking and cycling. Moreover, a cost-benefit analysis was also conducted as investment case for the prevention and control of NCDs and was recently launched.
However, the risk of NCDs has been growing in the country. Ethiopia is experiencing rapid economic development, with GDP growth averaging 10% in recent years. The country is aiming to reach World Bank middle-income status by 2025. Associated with this growth, there are significant urbanization and industrialization, that are attracting a massive migration to cities and towns, along with the development of industrial centers which need a consistent workforce.

> *"Together with economic growth, globalization and rapid urbanization of regional cities, Ethiopia is experiencing an increase in NCDs (principally cardiovascular diseases, cancers, diabetes and chronic respiratory diseases), and associated risk factors (tobacco and harmful use of alcohol, unhealthy diet, physical inactivity and environmental pollution) as well as mental disorders and injuries from multiple causes including motor vehicle accident, construction site injuries, and pervasive gender-based violence/assault"*

Ladies and Gentlemen,

The present challenge for Ethiopia is to combine its economic development goals with the human development, the environmental sustainability and the public health outcomes. This will require to continue the fight against communicable diseases (Malaria, TB, HIV/AIDS) while promoting and strengthening interventions for the control of NCDs and the relative risk factors. The national public health system needs to be reoriented by giving priority to intervention of primary prevention aiming at improving lifestyle for all the population, together with screening programs that target the population at risk. Furthermore, it is important to develop the capacity of the PHC system in order to provide the continuity of assistance specifically needed to treat chronic diseases and to assist patients affected by multiple pathologies (AIDS and cervical cancer, diabetes and CVD, TB and chronic respiratory diseases, etc.).

I earnestly believe that tackling NCDs requires a multi-sectoral approach interlinked with actions to address the broader social determinants of health such as poverty, equity and environmental concerns. Hence, there is an urgent need to implement nationwide public health initiatives with the involvement of different sectors, addressing prevention and control of NCD and their main risk factors. Such endeavor will immensely contribute to the achievement of SDG target 3.4 and the progress towards UHC. At the same time, the control of NCDs remains a priority in the HSTP II as well as in the Agenda 2030.

I understand that this workshop aims to bring together policy makers, technical experts, and development partners to discuss different experiences implemented in the country and define technical solutions based on evidences emerged in the integrated prevention and control of NCDs. I confirm that the Ministry looks forward to the outcome of this deliberation and considers the recommendations for program improvement at national level.

I hereby would like to acknowledge the effort of the Italian Agency for Development Cooperation in supporting the national priority initiative and initiating this important deliberation. This is the true essence of partnership in action!

Finally, I officially declare that this meeting is open and I wish you a fruitful deliberation.
Thank you.

3.2 Mr. Tiberio Chiari – Head of AICS Addis Abeba

Honorable State Minister Dr. Lia Taddesse;
Representatives from the Federal Ministry of Health and the Regional Health Bureaus;
International guests from the MoH of Palestine and Sudan, the Italian Agency for Development Cooperation in Jerusalem
International guests from Italy, from the Italian Agency for Development Cooperation Rome, Dermatologist and Oncologist Institutes, San Gallicano and Regina Elena;
Fellow distinguished members from Development Partners, local and international CSOs,
Ladies and Gentlemen

Good morning. እንደምን አደራችሁ (Indemin Aderachihu)?

It is an honor for the Italian Agency for Development Cooperation to be part of the organization of this workshop, which brings attention to the issue of double burden of Communicable and Non-Communicable diseases affecting the Country.

> *Italy considers this workshop timely because there is an increasing trend in Ethiopia, where NCDs currently cause 39% of all deaths and the demographic and socio-economic transition imposes more constraints on dealing with the double burden.*

The convergence of non-communicable disease and infectious disease, indeed, presents new challenges that require enacting responsive actions in policy that support prevention and control of these two predominant disease categories. Keeping in mind that NCDs and CDs share common features, such as long-term care needs and overlapping high-risk populations, and there are notable direct interactions, such as the association between certain CDs and cancers, as well as evidence of increased susceptibility to CDs in individuals with NCDs, strategies for addressing CDs and NCDs should be devised and implemented as complementary.

Nowadays, the preparation of the second phase of the Health Sector Transformation Plan – HSTP II is on progress and this represents a unique opportunity to address NCD and CD challenges in the upcoming 10 years strategic plan. It requires preparing the health system both to tackle NCDs and to ensure that efforts in CD prevention and treatment are not abandoned but rather supplemented by efforts in NCD management. It is an opportunity to strategically align the prevention, diagnosis, and treatment of NCDs and CDs.

> *"Ethiopia has always been a priority country for Italy. As a long-time partner, the Italian Government has been working closely with the Ethiopian Government and different other development partners, to contribute to the economic growth and modernization of the Country in a number of development areas, including health. The health sector represents a strategic partnership and the Italian Government has been supporting Ethiopia with a grant of more than 50 million euro during the last fifteen years."*

In particular, Italy has been supporting the development and implementation of the national Health Sector Transformation Plan (HSTP), focusing mainly on Health System Strengthening through health infrastructures improvement, procurement of essential drugs and medical equipment, strengthening of the National Health Management Information System, human resources development and Technical Assistance. With respect to the latter I would like to take a moment to remember Dr. Sandro Accorsi, who has been here engaged in providing technical assistance to the MoH for more than 10 years. We all remember him for his extraordinary energy and willpower to design, in collaboration with the MoH, evidence-based strategies and plans in order to improve the Ethiopian health system. During his stay in Ethiopia he earned the friendship of many thanks to his great competence and knowledge along to his human kindness. We miss him so much as we remember him. I'm sure Sandro would have been glad to being part of this workshop.

Moreover, Italy is also supporting the Ethiopian Government's efforts in the fight against CDs, in details HIV/AIDS, and in the prevention of NCDs. In this regard, I would like to bring to your attention to one of the recent results concerning tobacco control measures by which thanks to the Italian support the Ethiopian House of Parliament has passed an increased tobacco taxation and Smoke Free Environment laws. This result will allow the consumption reduction by around 19% and consequently save many lives.

As I said, the Italian commitment to support this sector will continue in the coming years, as we believe that health service is essential in achieving the ambitious transformation objectives outlined in the GTP II. Italy is recently engaged to support the Ethiopian Government in achieving the quality and equity of care for all, with a principle that no one should be left behind.

Just to inform you how much we care of the double burden, in the next Ethio-Italian Cooperation Country Framework 2020-22, which is under definition, Italy is interested to step up the NCDs' fight and to improve the double burden services available in the PHC (Primary Health Care).

With these few remarks, I would like to thank the Ministry of Health for making this workshop possible and to bring up this timely issue. I look forward to listening to the different presentations

and to learn from the various local and international experiences.

Finally, I would like to conclude my speech by thanking everyone who is present today and wishing to all of us a fruitful workshop.
Thank you.

4. ABOUT THE WORKSHOP

Ethiopia has made a significant progress on social development, including poverty reduction, with encouraging results on communicable disease control, improved nutrition, maternal and child health. The country is strongly committed to maintaining this progress towards Universal Health Coverage. At the same time, all segments of the population in Ethiopia show signs of the epidemiological shift occurring in most African countries, with a fast-growing prevalence of NCD, which call for new and innovative public health strategies to tackle the double burden of diseases.

In Ethiopia, there is evidence of an increasing burden of NCDs and their risk factors. A number of separate small-scale studies and the situational analysis conducted by the Federal Ministry of Health in 2015 (STEPS Survey)[1] substantiate the above conclusion. Accordingly, the Federal Ministry of Health developed a national strategic framework on the prevention and control of NCDs and their risk factors. The strategic framework recommended the development of a detailed National and sub-national Strategic Action Plan 2019-2025 (NSAP). The plan outlines detailed actions and interventions required in the prevention and control of the major NCDs, and their risk factors, which should receive due priority in Ethiopia. These are cardiovascular diseases, cancers, chronic respiratory diseases, diabetes and their shared risk factors including tobacco, physical inactivity, unhealthy diet, smoking, excessive alcohol use, as well as *khat* consumption. Mental, neurological and substance abuse disorders, that make a large contribution to NCDs, are dealt with separately in the National Mental Health Strategy[2].

Tackling NCDs requires a multi-sectoral approach interlinked with actions to address the broader social determinants of health such poverty, equity and environmental concerns. Prevention and treatment of NCDs represent one of the four categories of services indicators listed by WHO to monitor the level of equity and coverage in the progress towards UHC. There is an urgent need to implement nationwide public health initiatives, with the involvement of different sectors, addressing prevention and control of NCD and their main risk factors. Thus, contributing to the achievement of SDG target 3.4 and progressing towards UHC.

At the same time, control of CDs remains a priority in the HSTP as well as in the Agenda 2030 (SDG target 3.3). The convergence of CDs and NCDs represents a challenge and an opportunity to enable the provision of sustainable and integrated services aiming at reducing the risk to further increase inequality in accessing health care services in Ethiopia.

The workshop aims to bring together policy makers, technical experts, and development partners to discuss different experiences implemented in the country and define technical solutions based on evidences emerged in the integrated prevention and control of CDs and NCDs.

[1] STEPS Survey on Risk Factors for Non-Communicable Diseases and prevalence of selected NCDs in Ethiopia. Summary Report. EPHI, FMoH, WHO, December 2016.
[2] National Strategic Action Plan (NSAP) for prevention and control of non-communicable diseases 2018-2025 FMoH, June 2019.

4.1 Context

Ethiopia is one of the fastest growing economies in Africa with GDP growth averaging 10% in recent years. With the mentioned economic growth, globalisation and rapid urbanisation of regional cities, **Ethiopia is experiencing an increase in NCDs** (principally cardiovascular diseases, cancers, diabetes and chronic respiratory diseases), **NCD risk factors** (tobacco and harmful use of alcohol, unhealthy diet, physical inactivity and environmental pollution) **as well as mental disorders and injuries from multiple causes** including motor vehicle accidents, construction site injuries, and pervasive gender based violence/assault. Moreover, Khat use is widespread in Ethiopia.

The contribution of the health sector to the socioeconomic development of the country is critical as equitable human development relies on the health status and wellbeing of the society. Investing in health means investment in the current and future generations and towards sustainable development because economic growth without equitable social development may not be sustainable. The health sector should, therefore, be viewed as a conduit to development, and as a means to ensuring social justice and sustainable economic development. In the last two decades, morbidity and mortality from common communicable diseases has decreased, but the share of NCDs has increased from 17% to 35%, and thus creating a growing concern.

In Ethiopia, behavioral risk factors including malnutrition, dietary risks, unsafe sex, alcohol use, and tobacco use, constitute five of the top ten risk factors contributing to the most DALYs lost. Recent data suggest that by 2040, NCDs will account for nearly 70% of disability adjusted life years (DALYs) in Ethiopia.[3]

Lifestyle related risk factors for chronic diseases tend to be more prevalent in the younger age groups, resulting in higher premature mortality, considering that sedentary lifestyle is common among adolescents.[4] Whilst, among hypertensive patients, lifestyle modification practices is low.[5] According to the 2019 National Assessment of the HEP, only half of rural households adopted healthy behaviors related to family health, disease prevention and control, and hygiene and environmental sanitation.[6]

In Ethiopia, the most common cancers among adults include breast cancer (30.2%) and cervical cancer (13.4%). About two-thirds of reported annual cancer deaths occur among women. The main reasons for high cancer mortality include low awareness of cancer signs and symptoms, inadequate screening and early detection and treatment services, inadequate diagnostic and treatment facilities. **Despite the increasing burden of NCDs, available health services are very limited.** The 2018 SARA assessment revealed that only 36%, 49%, 53% and 9% of health facilities, excluding HPs, offered diagnosis and treatment for diabetes, cardiovascular diseases, chronic respiratory diseases, and cervical cancer, respectively. Overall readiness score for these services is very low ranging from 18% for chronic respiratory disease diagnosis and management to 51% for cervical cancer diagnosis.[7]

[3] Joint mission of the UN Interagency Task Force on the Prevention and control of NCDs, WHO, November 2017

[4] Mohammed OY, Tesfahun E, Mohammed A. Magnitude of sedentary behaviour and associated factors among secondary school adolescents in Debre Berhan town, Ethiopia. *BMC Public Health* 2020; 20, 86

[5] Buda ES, Hanfore LK, Fite RO, Buda AS. Lifestyle modification practice and associated factors among diagnosed hypertensive patients in selected hospitals, South Ethiopia. *Clinical Hypertension* 2017

[6] Teklu AM, Alemayehu YK, Medhin G, et al. National Assessment of the Ethiopian Health Extension Program 2019. MERQ Consultancy PLC. 2020

[7] NCD STEPS Survey conducted in 2015.

NCDs and their risk factors have a complex interaction with each other, with infectious diseases, nutritional deficiencies and other communicable conditions. This will require continuous action against CDs (Malaria, TB, HIV/AIDS) while promoting and strengthening interventions for the control of NCDs and the relative risk factors.

4.2 Objectives of the workshop

1. To present the local experiences and discuss evidences emerging in the implementation of NCDs prevention and control activities in different contexts.
2. To discuss meaningful interventions of primary prevention aiming at promoting healthy lifestyles for all the population.
3. To discuss possible technical solutions to integrate screening and treatment of patients affected by multiple pathologies (CDs and NCDs) at the same point of care.
4. To discuss the capacity of the PHC system in providing the continuity of care for patients affected by chronic diseases.
5. To share international experiences on integration of health service delivery approach on the prevention and control of NCDs and communicable diseases.

4.3 The two facilitators of the workshop

The workshop was facilitated by Mrs. Hiwot Solomon, DPCD Director - MoH, and by Dr. Kunuz Adbella, Technical Assistant at the DPCD - MoH.

Mrs. Hiwot Solomon is a public health specialist and PhD candidate with more than 12 years-experience in Communicable & Non-Communicable Disease programs management. She has also served as Malaria Program Manager and TB Program Officer at MoH. She is engaged in a wide range of programs, policy and strategic issues.
Mrs. Hiwot successfully led the Malaria Prevention and Control Program for seven years. During her time, the Program developed national district/woreda level epidemiological stratification for targeting interventions, better understanding of the disease burden and evidence-based intervention design and implementation.
Mrs. Hiwot is no stranger to NCD as she has been working closely with different NCD programs. To date, she took the initiative of rearranging the NCD programs to give particular focus and efficient implementation of the individual disease program components and bringing on-board all relevant stakeholders working in the area.

Dr. Kunuz Abdella is a public health professional with over 20 years of experience in health system policy research, program development, and strategic planning. He holds a Doctor of Medicine from Addis Ababa University, and a Master of Science Degree from Heidelberg University in Germany with majors in community health and health management in developing countries, focusing on research on health seeking behavior and risk pooling among the poor.
Dr. Kunuz's career is built on cumulative experience from grassroot health program implementation at district level to national and international health program design, strategic leadership and management. Currently he is a senior advisor to the Minister of Health of Ethiopia on Non-Communicable Diseases and Cancer. In this role, he had developed the first ever National Cancer Control Plan (NCCP) for the period 2016-2020.

5. DAY 1: 26 February 2020

5.1 Site visits: Kazanchis and Yeka Health Centers

With the objective of showcasing the Ethiopian experience on the integration of health service delivery approach on the prevention and control of NCDs and communicable diseases, a half day visit to two health centers, the Yeka Health Center (YHC) and the Kazanchis Health Center (KHC), was organized. The health centers are two of the best performing in Addis Ababa with a wide catchment population.

During the morning session of Day 1, following registration of the participants, two teams were set up. The first team visited Kazanchis Health Center while the second visited Yeka Health Center.

Upon arrival to the Health Centers, teams were welcomed by Mrs Saliya Osman, Disease Prevention and Health Promotion (DPHP) Core Process Owner and Mr. Demeke Workineh, Medical Director for KHC and YHC respectively. In both cases the first part of the site visit consisted in a brief presentation about the health centers and a Q&A session to be followed by a visit to the different departments (FTH coordination office, registration and triage, consultation room, chronic illness management department, process recording room and referral of high-risk case for advanced care).

Kazanchis Health center, Kirkos Sub city, at a glance

Established in 1940 Catchment population: 76,602 (36,769 M; 39,837 F) Children < 1: 1,708 Children <5: 5,477 Women 15-49 years: 26,536 Pregnant women: 1,785	The KHC was the only Sexually Transmitted Diseases service provider for the last 40 years. Currently, it provides all health services to its catchment population in three proximal woredas and focuses on diseases prevention, promotion, and curative services. **6 months performance data:** **I) Diabetes Mellitus (DM) cases:** ➢ The health center has one separate chronic unit for regular follow-up of DM cases and in the past 6 months the number of individuals screened for DM were 1,130 and 246 were found with high blood sugar level; 189 enrolled to chronic care, 40 were newly started medication and 149 patients were on life style changing support. **II) Hypertension (HPN) cases** ➢ 2,917 individuals were screened for hypertension; 640 were found to have high blood pressure of which, 633 were enrolled to chronic care. 188 patients started medication for the control of hypertension and 445 were on lifestyle change. **III) Cancer Cases** ➢ 78 cervical cancer screened patients were referred to Zewditu Hospital for further investigation and management **VI) Mental Health cases** ➢ 386 new cases were enrolled.

Kazanchis Health Center: visit organized by the FHT for the participants of the workshop.

Yeka Health Center: visit organized for the participants of the workshop.

Yeka Health center, Yeka Sub city, at a glance

Established in 1970 Catchment population: 40,508 (19,848 M; 20,659 F) Children <1: 891 Children < 5: 2,851 Pregnant women = 907 Women 15-49yrs = 13,493	**6 months performance data** **I) DM cases** ➢ The health center has one separate chronic unit for regular follow-up of DM cases and in the past 6 months 541 cases were on follow up **II) HPN cases** ➢ 47 new cases were enrolled in care and other 32 were transferred in from another institution. 552 HPN patients were on regular follow up in the HC **III) Cancer Cases** ➢ 62 patients screened, 8 patients with cervical lesion took Cryotherapy treatment for suspicious cancerous lesion **IV) COPD cases** ➢ 61 asthma cases seen in Emergency OPD (they usually do not have regular follow–up) **V) Mental Health cases** ➢ 70 new cases were enrolled and 251 cases are on regular follow -up

Management of NCD cases in the health centers

Case Screening

Screening is done in different departments depending on the cases. Hypertension screening is done at the triage while DM and mental illnesses are often seen in the OPD or Emergency Room (ER). Cervical cancer screening is conducted for those referred from the OPD, ART room, Family Planning (FP) room and other service outlets. Following these screenings patients will be internally referred to the responsible department.

Case management

Following the screening process and referral to the responsible department, history taking, baseline investigation and full registration will be done. If the case can be managed at HC level, self-care advices and/or medication will be provided and follow-up card will be issued for the next visit. If further investigation is required or follow up patients' conditions worsen, a referral is made to a higher health institution.

Family Health Teams

The HCs present five Family Health Teams (FHT) composed of 8-12 health professionals such as Health Officers, General Practitioners, Clinical Nurses and Health Extension Workers. Other types of health professionals are assigned as necessary. Each FHT is divided into two sub teams: the Community Placed Sub-team and Health Center Placed Sub-team.

1. **Community Placed Sub-team**: is responsible to cover health interventions in the individual households (HHs) and focuses on health promotion, disease prevention, basic curative as well as home based palliative care, school, and workplace visits. The community placed sub-team is also targeting homeless people. It further supports Women Development Armies (WDA), strengthens

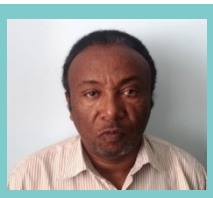
model institutions and inter sectorial collaboration. The FHT conducts community mapping and produces a map to outline the households within its catchment area where major landmarks such as roads, churches, mosques, schools, government offices, youth centers, private clinics, pharmacies etc. are also depicted. The Urban Health Extension worker visits to ten priority households every working day according to the baseline survey findings. The sub-team changes every two weeks and/or every month. The health service package includes maternal health, child health, non-communicable diseases (NCDs), communicable diseases (CDs), hygiene and sanitation, palliative care, prevention and management of injuries and occupational health. The FHT has a regular communication with the HC through monitoring tools, daily movement plan, weekly planning and performance monitoring sheet, weekly reporting templates, health education register, service data recording and community-based referral register tool, referral slip, daily and weekly meeting agendas.

2. **Health Centre Placed Sub-team** is responsible for curative services following five major steps including registration and triage, record processing, consultation, service provision, and referral for advanced and high-risk cases for further diagnosis, care, and treatment.

The primary focus of the FHT is early screening, detection, and treatment. The team is worth as an entry point to ensure easy access to HHs, especially the marginalized and vulnerable population groups, to all spectrum of health care services ranging from primary to the tertiary ones. Critical focus and due attention are paid to the prevention and treatment of NCDs. Integration of programs and training of health care providers is an essential part of strengthening future engagement of the HC without compromising the provision of quality and equitable health care services to catchment population on NCDs and other health services.

5.2 Presentation #1: Ethiopian National NCD Strategy and NCD implementation in Primary Health Care

Dr. Mussie Gebremichael (MD, MPH),
DPCD, Ministry of Health
Addis Ababa, Ethiopia



Dr. Mussie G/Micheal graduated in Medicine and MPH from Addis Ababa University. He worked at Dembi health center and Adama General Hospital for 11 years as a general medical practitioner. Then, joined the Ministry of Health and served as Non-Communicable Diseases senior expert. He has experience in designing and developing strategy documents on major Non-Communicable Diseases (CVDs, diabetes, CRDs and cancer) in general and Tobacco control in particular. He participated in the design of different projects on major NCDs and their implementation at PHC level. Furthermore, he participated in the design of major NCDs guidelines and training manuals and monitoring and evaluation tools. He published more than 10 articles on NCDs, Road traffic injuries and NCD risk factors.

The Ethiopian National NCD Strategy

The presentation started with the explanation of the contents of the strategic document. **The National Strategic Action Plan (NSAP) for prevention & control of Non-Communicable Diseases (2018-2025)** was developed with the goal of reducing the burden of NCDs by promoting healthy lifestyle, reducing common risk factors and providing integrated, evidence based, innovative and cost-effective clinical interventions.

The six chaptered strategy, which also explains the scope of the NSAP for prevention and control of NCDs, aims at reaching the following **objectives:**

- To strengthen national capacity, public policies through health in all policies, leadership, governance, multi-sectoral action, and partnership.
- To reduce exposure to modifiable risk factors for NCDs and promotion of health throughout the lifecycle.
- To strengthen and reorient health systems to address prevention and control of NCDs.
- To improve national capacity for NCDs and risk factors surveillance and research.
- To enhance international cooperation and advocacy.

The **targets** to be reached are listed below**:**

- A 25% relative reduction in the overall premature mortality from NCDs by 2025;
- A 25% relative reduction in the prevalence of ARF/RHD by 2025 in age group 4-24 years old;
- At least 50% of eligible hypertensive people receive drug therapy and counseling (including glycemic control) to prevent heart attacks and strokes by 2025;
- An 80% availability of the affordable basic technologies and essential medicines including generics, required to treat major NCDs in both public and private facilities;
- Increase the percentage of people controlled for hypertension from baseline to 60% by 2025 in sentinel sites;
- Increase the percentage of people controlled for diabetes from baseline to 60% by 2025 in sentinel sites;
- All health centers and hospitals provide routine and emergency asthma care;

- Increase the proportion of women 30-49 years screened for cervical cancer from 5% to 40 % by 2025;
- Reduce cancer incidence from 67,000 to 63,650 by 2025.

The strategic document describes as **priority areas** the strengthening of the national response through policy, governance, leadership and coordination. It includes the intensification of health promotion and prevention of NCDs and their risk factors, the integration of comprehensive clinical intervention for NCDs and their risk factors, and the conduct of researches, surveillance, monitoring and evaluation.

Furthermore, the strategic document enlightens the multisector response for NCDs, the specific health sector response for NCDs, roles, and responsibilities and coordination as well as the costing and financing of the national strategic action plan.

NCD implementation in PHC

Regarding NCD implementation at primary health care unit level, Dr. Mussie highlighted some of the major activities. A national TOT was conducted for 23 health care providers from major cities of the country on Rheumatic Heart Disease (RHD). 180 HPs were provided with basic training on RHD diagnosis and management. Furthermore, RHD program was piloted in two hospitals and 6 health centers in collaboration with AAU-CHS.

Similarly, 180 PHC facilities are currently implementing hypertension/DM and/or asthma services through four projects implemented by NGOs, such as Healthy Heart Africa (HHA), Tropical Health and Education Trust (THET), Doctors with Africa CUAMM (Collegio Universitario Aspiranti Medici Missionari), RTLS (Resolve To Save Lives) and Help Age International).

Achievement

Some of the major achievements documented in the projects include:

HHA

- Capacity building on service provision is given to 1,515 service providers (492 on treatment, 1,023 on risk assessment and screening).
- More than 1.6 million individuals are screened; of which 198,964 have high BP (12.3%) and 48,218 are enrolled into care (24%) – 41% were on LSM only and 59% on LSM and Medication.

THET

- Training on NCD prevention and treatment delivered to 383 primary healthcare providers, 116 health extension workers and 30 trainers.
- More than 41,000 people were screened over the period of 10 months, out of which 4,201 enrolled into health service and started their treatment.

CUAMM/RTSL/Help age

- Capacity building provided to 60 health workers, more than 300 HWs received basic training on DM & HTP with CUAMM and Help Age support, whilst more than 470 health professionals were trained on hypertension and COMBI with RTSL support.

Government

- Major NCD services integrated into the national Primary Health Care Clinical Guideline and implementation reached more than 200 Health Centers.
- Master ToT provided on EPHCCG for 120 health professionals selected from MoH, RHBs, ZHDs and health facilities distributed over 9 regions and 2 city administrations.
- NCDs integrated into the Health Extension Program.

- More than 500 health workers trained on cervical cancer screening from PHC facilities.
- More than 400,000 women benefited from cervical cancer screening and about 10% had pre-cancerous lesions for whom cryotherapy was carried out.

Challenges

Whilst the major challenges in relation to NCDs service implementation include:

- the limited budget at Federal level;
- no earmarked budget at RHB;
- limited number of partners supporting NCD Programs;
- interruption of medicines;
- poor quality of equipment and lack of lab reagents;
- poor equipment maintenance and calibration system;
- low level of awareness on NCDs and their risk factors among policy makers, HWs and the community;
- gaps in referral and linkages to NCD/chronic follow up services;
- weak program monitoring and evaluation;
- poor recording and under-reporting of data due to the workload of trained staff;
- absence of indicators for some of the NCD sub-programs.

Similarly, human resource shortage and staff turnover, lack of motivation of trained staff, lack of ownership of NCDs program at PHC level, and poor post-training follow up/mentoring support to project sites were mentioned as challenges.

Way forward

The presenter suggested different way forward such as cascading training on EPHCCG for 1,500 PHC workers, providing mentoring support, mobilizing funds for M&E tool duplication, and starting implementation of resolve project within 70 PHC facilities. Similarly, he also proposed the implementation of cervical cancer screening within each Woreda, engagement of health facility managers to enhance NCD services, provision of IRT training to UHEPs and rural level IV HEWs on healthy life style promotion, risk factor assessment and screening activities of NCDs as way forward. Furthermore, he pointed out other important next steps: the improvement documentation, recording and reporting of NCD data as well as a strong advocacy work for decision makers at each level for improved allocation of funds earmarked to NCDs' fight.

5.3 Presentation #2: STEPS Survey on risk factors for NCDs and prevalence of selected NCD, EPHI, FMoH, and WHO, Ethiopia, 2016

Dr. Mussie Gebremichael (MD, MPH)
DPCD, Ministry of Health
Addis Ababa, Ethiopia

The general objective of the **NCD STEPs Survey** was assessing risk factors for major chronic NCDs and prevalence of selected NCDs to establish baseline information. It specifically aimed at estimating the magnitude of behavioral and biological risk factors for major NCDs; determining the prevalence of high BP and glucose level in Ethiopia; assessing the socio-demographic characteristics in relation to major NCD risk factors; and providing reliable and valid information for planning and evaluating public health interventions.

The survey design followed WHO Step wise approaches based on socio-demographic & behavioral information: physical measurements, and biochemical measurements. The survey data were collected entirely using PDAs, who utilized the eSTEPs software for data collection. The data were then transferred to a central server located at EPHI
There were 10,260 study participants with 94.3% response rate.

Major findings

Dr. Mussie highlighted the major findings of the survey by illustrating different **behavioral risk factors**: 4.2% of alcohol consumption 40.7% of *khat* consumption 15.8% of fruit consumption, 2.4% of vegetable consumption, and 6% of physical inactivity. Similarly, the study showed the presence of the following cases: 3% road traffic accidents, 40.2% accidental fall, 31.5% cut, 2% sexual abuse and 2.7% cervical cancer. On the other hand, **physical and biochemical risk factors** revealed the prevalence of 6% of overweight, 16% individuals with raised BP, 5.9% with elevated Blood Glucose level, 5.6% with elevated total cholesterol and 8g per day of mean salt intake. Moreover, the survey also showed that the surveyed individual presented one to two combined risk factors (current daily

smoking; < 5 servings of fruit and/or vegetables/ day; <150 minutes of moderate p. activity/week; BMI ≥ 25 kg/m2; high Blood Pressure), as depicted in the graph below.

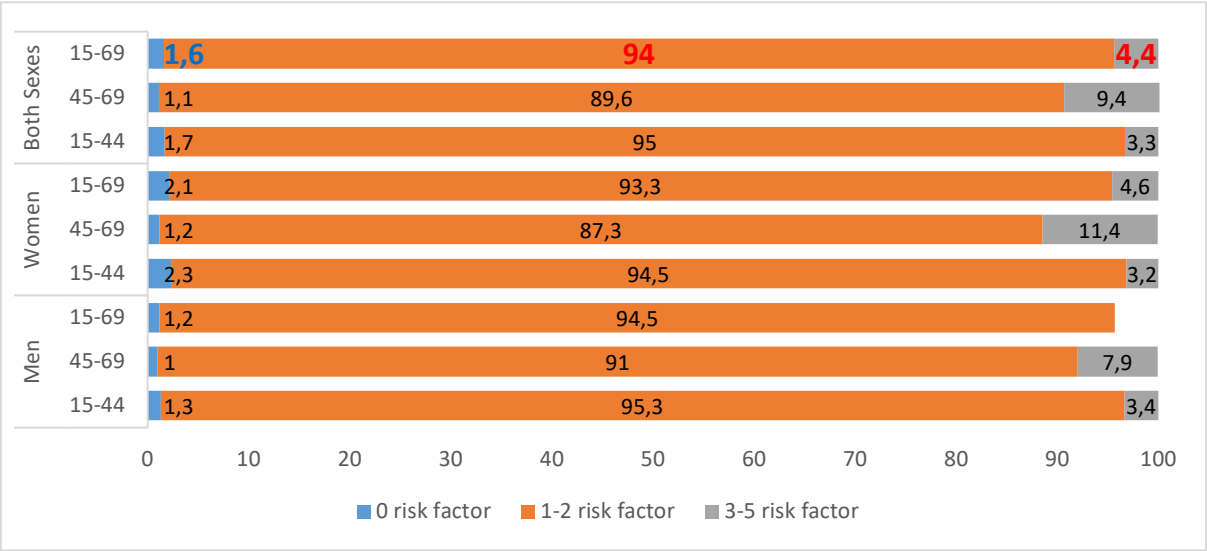


Fig. 1 % of individuals presenting one or more combined risk factors (source: STEPs survey).

On the multivariate logistic regression analysis, raised BP is directly associated with sex and low physical activity, while elevated Blood Glucose with *khat* consumption and raised BP. Similarly, alcohol consumption, salt consumption, living in urban settings and age are directly associated with both raised BP and elevated Blood Glucose level.

In conclusion, Dr. Mussie indicated that the survey findings suggested:

> *...modifying lifestyle, applying multi-sectoral approach, strengthening PHC and conducting NCDs surveillance could be solutions to tackle the problem.*

5.4 Presentation #3: The Ethiopia NCDI Commission Report, 2018

Dr. Alemayehu Bekele (MPH, PhD, Post-doctoral Fellow)
AAU, Addis Ababa, Ethiopia

The aim of the **Ethiopia NCDI Commission Report** is generating local evidence on the epidemiology of NCDIs and suggesting a package of NCDI interventions that should be prioritized for scale-up or implementation in Ethiopia. In addition, the report helps in documenting best practices on integration of interventions with primary health care and in developing pro-poor pathways for NCDI services that can inform national health sector strategic and operational planning. He explained that a systematic review was undertaken to identify studies, NCDs and their risk factors in Ethiopia. The MEDLINE/PubMed, Cochrane Libraries, HINARI, Google Scholar, EMBASE, World Bank, WHO Regional Databases, and local journals including grey literature from academic repositories were used as source of information. Besides, articles with clear objectives and methodologies published in the English language from 1990 to 2017 were also used for the systemic review.

Dr. Alemayehu Bekele Mengesha is a Postdoctoral Fellow at CDT-Africa and a Doctor of Philosophy (PhD) in Public Health/Epidemiology from the University of South Africa, Pretoria. He graduated with an MPH in Epidemiology and Biostatistics from AAU and BSc in Public Health and clinical medicine from Jimma University. He has more than fifteen years of experience in public health services including public health research and publication, programs/projects management, capacity development/teaching and clinical care services, in Ethiopia.
Dr. Alemayehu is a member of different national TWGs and Committees including the National Polio Certification Committee, National Polio Vaccination Switch Committee, Tobacco Control and Prevention Technical Working Group, National Non-Communicable Diseases Control and Prevention Technical Working Group, Commissioner of National Non-Communicable Diseases and Injuries and Technical Working Group member for STEPS survey on NCDs risk factors at EPHI.
He produced more than 30 publications and manuscripts in the areas of Public Health surveillance on priority communicable diseases, Non-Communicable Diseases, nutritional problems, Human Resource for Health, maternal and child health problems, Health Policy etc.

The burden of NCDIs in Ethiopia

The mortality rates due to NCDs and Injuries as disaggregated by urban and rural residence were 58.2% and 45.4% respectively.

Area of residence	Non-communicable diseases (NCDs)	Communicable, Maternal, Neonatal and Nutritional Diseases	Injuries	Others
Urban	52.2%	40.1%	6%	1.6%
Rural	34%	36.8%	11.4%	17.9%

Tab. 1 NCDI related mortality by area of residence (NCDI Commission Report).

The mortality distribution pointed out that the NCDs and injuries accounted for an estimated 52% of total deaths (for all ages and both sexes), 43% and 9% respectively, while the CMNN accounted for 48%.

In particular, cardiovascular diseases and cancer contribute to an estimated 54% of the NCDs and injury mortality, as shown in the below figure.

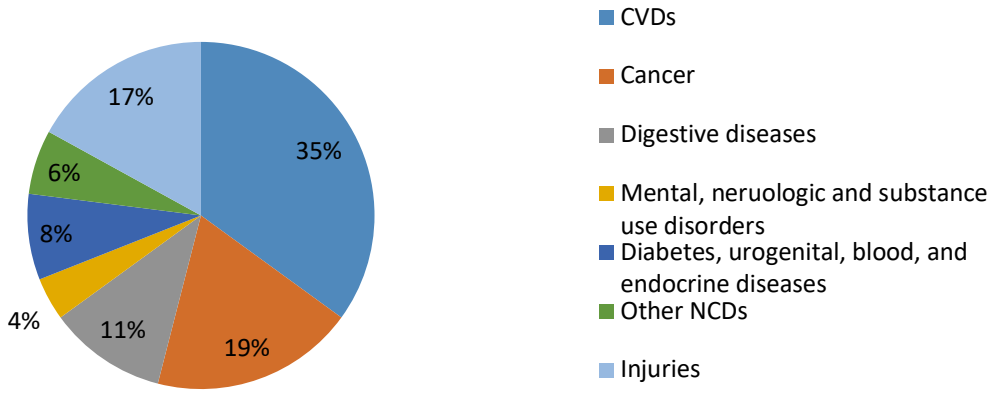


Fig. 2 Distribution of Mortality and Injuries, all ages and both sexes (source: NCDI Commission Report).

As described below, the causes of death differed by age groups, with most deaths due to communicable, maternal, neonatal, and nutritional (CMNN) disorders occurring early in life while deaths due to NCDs tend to occur later in life. Still, most (68%) of the NCDs mortality in Ethiopia occurred in individuals <70 years of age.

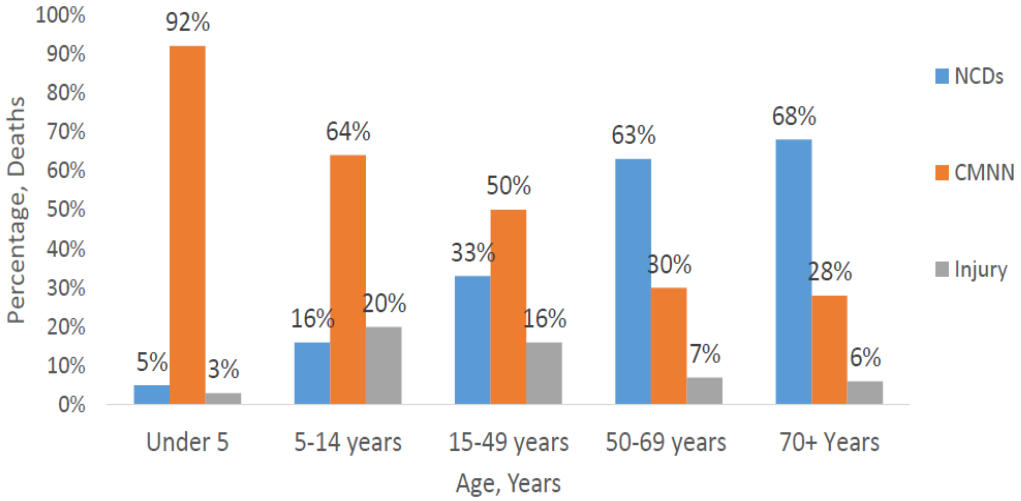


Fig. 3 Mortality distribution by cause and age in Ethiopia (source: NCDI Commission Report).

In addition, more than one third of all deaths and disability are attributable to NCDIs in Ethiopia, as illustrated below.

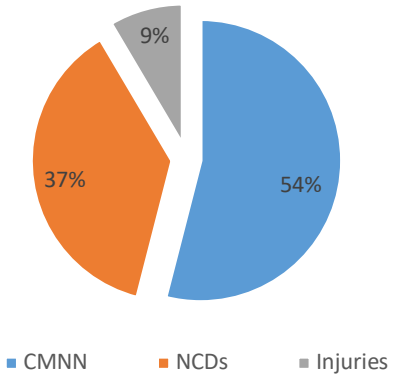


Fig. 4 Disease burden (deaths and disability combined = DALYs) for all major conditions and injuries (source: NCDI Commission Report).

Moreover, among the NCDIs, cardiovascular diseases, injuries, cancer and mental illness contribute the highest loss of DALY's.

Behavioral Risk factors for NCDs

➢ Tobacco use

In the already mentioned STEPs survey, the prevalence of current smokers in Ethiopia was 4.2% with large variations between men and women (7.3% among men vs. 0.4% in women). Institution and community-based surveys revealed a prevalence of 8.1% and 5.8% (13.8% in men and 0.3% in women), respectively. The prevalence of tobacco use was higher among the poor where the lowest two quintiles had a rate 2.2 times higher than the richest two quintiles.

➢ Alcohol use and misuse

Institution-and community-based studies revealed current alcohol consumption prevalence of 24% and 25%, respectively.

The STEPs survey showed a higher prevalence of current alcohol consumption, i.e. 40.7% (46.6% among men and 33.5% among women) and alcohol misuse was found to be 12.5%.

Odds of alcohol consumption increased with age.

Prevalence of lifetime alcohol abstainers was higher among the poor, but frequency of alcohol drinking was lower among wealthier quintiles (EDHS 2016).

Five studies also reported alcohol use disorder with a prevalence of 5.5% (range 3% to 39%), the rate was higher among men.

➢ *Khat* use

Institution based studies on current *khat* use, mostly among higher education students, showed a prevalence of 18% (range: 6.3% to 33.1%). The average for two community-based studies was 21%.

The STEPs survey showed a prevalence of 15.8% with a higher prevalence among men. The wealthier quintiles were more likely to abstain from *khat* consumption.

➢ Physical inactivity

In Ethiopia, 13.6 % of the population has low/insufficient physical activity.

The STEPS survey revealed that the physical inactivity is more prevalent among women (19.4%) than men (8.6%).

The wealthiest quintile was the least likely to indulge in physical activity.

➢ Fruits and Vegetables consumption

There is low fruits and vegetables consumption in Ethiopia with an average intake of less than 1.5 days per week, according to the STEPS survey.

Almost 98% of individuals do not consume fruits and vegetables in accordance with WHO recommendations.

Wealthy individuals were more likely to consume fruits and vegetables than the poor were.

➢ Salt intake

Mean salt intake in Ethiopian population was estimated as 8.3g/day. Overall, 96.2% of the study participants (97.5% in men and 95.3% in women) had more salt intake than the WHO recommendations (5g/day).

➢ Indoor Air Pollution

Based on the review of six studies conducted in urban and rural Ethiopia, the prevalence of household biomass fuel use ranges from 60% in Addis Ababa (urban) to 100 % in rural communities.

Women and girls, including young children, are disproportionately exposed to indoor air pollution.

While cigarette smoking is the leading preventable cause of COPD in developed countries, household air pollution from inefficient burning of solid fuels may be the leading preventable cause among women and children in developing countries.

➢ Hepatitis Virus Infection

A meta-analysis of studies on HBV in Ethiopia revealed a prevalence of 7.4%.

The same analysis showed an HCV prevalence of 3.1%.

Most patients in Ethiopia (85% - 95%) do not know their chronic HBV and HCV infections status and fewer than 5% access treatment.

Based on GBD study, cirrhosis of the liver is the 6th highest cause of mortality (5%) from NCDs in Ethiopia in 2015. A study conducted in a tertiary health facility in Addis Ababa, among patients with hepatocellular carcinoma, confirmed HBV or HCV infections in 48% of the cases.

Biological risk factors of NCDs

➢ Overweight/obesity

The STEPs survey showed a prevalence of 6.3% overweight or obese and 1.2% obesity rates among individuals 15-69 years old. Obesity and overweight rates were higher among those residing in urban areas and in females. Both overweight and obesity rates were correlated with wealthier quintiles.

➢ Hyperglycemia

Hospital-based studies among either HIV-infected cases or patients with tuberculosis had the highest prevalence (7.8%).

A prevalence of 1.3% (5.4% urban and 0.3% rural) was observed in a three-year pooled data amongst outpatient visitors of Ayder Referral Hospital from Northern Ethiopia.

A community-based study conducted among urban and rural residents in Northwestern part of Ethiopia showed a prevalence of 3.5% with higher prevalence among urban women (5.6%).

Three institution-based studies among urban residents revealed a prevalence of 6%.

➢ Hyperlipidemia

The STEPs survey showed 5.2% of the population had raised total blood cholesterol level, 3.9% in males and 6.8% in females. Higher blood cholesterol level was observed

among wealthier quartiles and urban residents.

Prevalence of major NCDIs

➢ Raised blood pressure

Hypertension is a leading global risk factor for CVDs such as stroke, coronary heart disease, congestive heart failure, peripheral arterial diseases and renal failure. Community-based studies showed a prevalence of 26.5% (27.9% in men and 25.2% in women) among urban residents in Ethiopia. Four of the community-based studies were disaggregated by area of residence showing an average prevalence of 16.1% (21.8% urban and 13% rural). Despite medications and follow-up, majority of patients (74%) had poorly controlled hypertension.

➢ Stroke

Even though there was variability between studies, the average of eight studies showed that more males than females were affected in Ethiopia with a male-to-female ratio of 1.28 to 1.

➢ Rheumatic Heart Disease (RHD)

A community-based study on a predominantly rural population in Ethiopia revealed a prevalence of 37.5 definite cases per 1000 population. The RHD was the major cause of cardiovascular morbidity (in 46.6% of cases) among admitted patients and those under follow-up in tertiary facilities in Ethiopia. Patients with symptomatic RHD face a very high mortality rate. A follow-up of 43 patients enrolled in a secondary prevention program in Northwestern part of Ethiopia showed a 12.5% annual mortality rate in contrast with the annual mortality rate of 1.5% used to estimate worldwide annual mortality from RHD.

The global registry of RHD (Remedy study), of which Ethiopia was also a part, showed that RHD patients were young, predominantly female, and had high prevalence of major cardiovascular complications.

There is suboptimal utilization of secondary antibiotic prophylaxis, oral anti-coagulation, and contraception (for reduction of pregnancy-related complications), and variations in the use of percutaneous and surgical interventions by country income level. RHD was the second most common risk factor for stroke in the young population, following hypertension.

➢ Chronic Respiratory Diseases

A study conducted in Addis Ababa on patterns of respiratory diseases seen at chest clinic of a tertiary care Hospital in Ethiopia over one-year period showed 28.3% were due to asthma, 18.5% due to post TB complications, 16.6% were managed for active tuberculosis, 9.7% had a diagnosis of lung mass and 7.4% presented pleural diseases.

➢ Asthma

Magnitude of asthma in Ethiopia is not well known and, based on some studies, the estimated prevalence of asthma in Ethiopia is between 1.5% and 3%.

Most children with asthma symptoms are unaware of their problem and remain untreated.

➢ Cancers

Dr. Alemayehu described the cancer types and ratio, as illustrated in the below table. Cancer, especially breast and cervical cancers, is a staggering public health problem in Ethiopia. Two-third of the incident cases occurred in females, while the rest were in males with female-to-male ratio of 2:1.

Men			*Women*		
Type of cancer	ASIR per 100,000	Estimated number of cases	Type of cancer	ASIR per 100,000	Estimated number of cases
Colorectal	9.0	2632	Breast	43.3	13987
NHL	6.6	2305	Cervix uteri	22.0	6047
Prostate	6.4	2269	Ovary	8.1	2436
Leukemia	6.3	1386	Colorectal	7.1	2137
Lung & bronchus	3.5	966	Leukemia	5.5	1886
Urinary bladder	3.4	905	Thyroid	4.7	1653
Stomach	3.2	891	NHL	4.1	1374
Liver	2.8	860	SCC of skin	3.8	1171
SCC of skin	2.7	808	Uterus	3.2	961
Connective & soft tissue	2.3	764	Liver	3.1	809
All types of cancers	70.0	21,563	All types of cancers	139.3	42,722

Tab. 2 Standardized Incidence Ratio for cancer types (source: NCDI Commission Report).

➢ Mental and Neurological Disorders

Most population-based studies regarding the prevalence of mental and neurologic disorders such as depression, bipolar disorders, schizophrenia and epilepsy were conducted in Butajira district. Fekadu, et al (2007) and Deyessa (2009) reported a prevalence of depression among 15-49-year-old of 2.2% and 4.4% (only in women), respectively. Whilst, a community-based study in Butajira depicted a prevalence of epilepsy of 5.2 cases per 1000 population.

Another survey, in adults aged 18 or more, reported a depression prevalence of 9.1%; 8.7% among men and 9.5% in women.

A prevalence of bipolar disorder of 0.5% (0.6% in males and 0.3% in females) was reported by Negash (2005), while Kebede (2003) reported a schizophrenia prevalence of 4.7 cases per 1000 population.

In the Ethiopian rural community, schizophrenia and depression alone accounted for over 11% of the burden of diseases.

Accessibility to health services

The 2014 Ethiopian Service Provision Assessment Survey Plus (ESPA+) shows that, the proportion of facilities offering services for

- Chronic respiratory disease was 76%;
- Cardiovascular diseases 73%;
- Diabetes 59%,
- for mental health 32%; and
- Cancer 23%.

The availability of guidelines for diagnosis and management of chronic respiratory diseases, diabetes, cardiovascular diseases, and cancer were 15%, 12%, 11%, and 7%, respectively.

The availability of trained staff on diagnosis and treatment of chronic respiratory diseases, cardiovascular diseases, diabetes, and cancer were only 9%, 8%, 6%, and 4%, respectively.

NCDIs Services	Reported Availability in HF except HPs (n=547)	Availability in Health Center vs. G. Hospital	Average Readiness in HF except HPs	Criteria for Readiness
Diabetes	22%	16% vs. 90%	53 %	7 of 13 tracer items
Cardiovascular Diseases	41%	50%vs. 92%	41 %	6 of 12 tracer items
Chronic Respiratory Diseases	45%	55% vs. 92%	27% (n=372)	6 of 11 tracer items
Cervical Cancer	2%	2% vs. 38%	72 % (n=81)	2 of 4 tracer items
Basic Surgical Services	52%	48% vs 96%	41%(n=380)	9 of 17 tracer items
Comprehensive surgical services	NA	0 vs. 97%	72% (n=32)	9 of 17 tracer items
Blood transfusion	35%	1% vs. 96%	56% (n=193)	4 of 7 tracer items

Tab. 3 Access and readiness of health facilities for NCDIs services (source: NCDI Commission Report).

NCDIs financing

Most of the NCDI services in Ethiopia were financed by Out Of Pocket (OOP) expenditures from households (see Figure 5 below). Government was responsible for nearly 30% of NCDIs expenditure, while the contribution of donors for such services was negligible at only 1%.

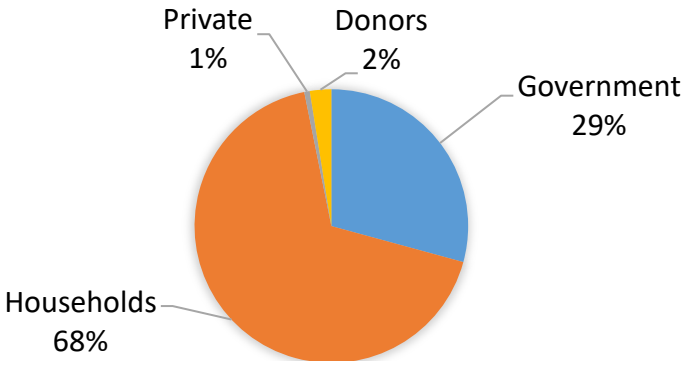


Fig. 5 Existing financing arrangements for NCDIs services in Ethiopia (source: NCDI Commission Report).

Way forward

Dr. Alemayehu, additionally, presented the interventions recommended by NCDI Commission which built on WHO PEN interventions and Disease Control Priorities project for primary health care in low-resource settings. Accordingly, NCDI commission recommended 90 clinical services, population-based preventive interventions, and 23 policies, laws, and inter-sectoral interventions. On top of that, he stressed that:

> If the highest priority NCDI services were scaled up to 30% coverage over the next five years, the extra cost per capita would be less than US$ 5.

Finally, Dr. Alemayehu concluded his presentation by showing results of the priority setting process that includes the following points.

- The costs for the prioritized interventions were listed as annual incremental cost, which is the annual additional cost of introducing or scaling up the intervention.
- Screening for cervical cancer and treatment of pharyngitis in children to prevent rheumatic heart disease are examples of very cost-effective interventions with cost effectiveness ratios below 100 USD (2012) per DALY averted.
- Acute management of stroke and peritoneal dialysis are among the least cost effective of the considered interventions, with cost effectiveness ratios above 30 000 USD (2012) per DALY averted.

5.5 Presentation #4: The Case for Investment, including considerations on the impact of khat Report, 2019

Dr. Assmamaw Bezabeh (MD, MPH)
WHO Ethiopia
Addis Ababa, Ethiopia

Dr. Assmamaw Bezabih, from WHO Ethiopia, presented a relevant topic on case investment on NCDs. He started his presentation by acknowledging institutions (MOH, WHO HQ/CO, UN Inter-Agency Task Force on NCDs and UNDP) that participated on the Case Investment Study and the Ethiopian Government on passing the landmark smoking excise bill. An **NCD investment case** is a quantitative analysis for getting economic arguments for investment in NCDs prevention. The study aimed at demonstrating the economic burden of NCDs in Ethiopia, generating evidence that implementing a set of cost-effective policies between now and 2033 will have substantial economic rewards, presenting the case investment to the Ministry of Finance by the Ministry of Health and advocating the case to policy-makers.

The study utilized the NCDs economic burden model developed by WHO and UNDP, while policy and clinical interventions were calculated using the WHO costing tool and OHT. The excel-based ROI model developed by WHO and UNDP was used as instrument to determine the economic burden by NCDs.

Dr. Asmamaw Bezabeh Workneh has an MPH from James P Grant School of Public Health (JPGSPH) Brac University, Bangladesh and Doctor of Medicine (MD) from AAU. He has worked in different organizations and positions including WHO Ethiopia as National Professional Officer/Non-Communicable Diseases (NPO/NCDs) and as a consultant on HIV/AIDS and Evidence Based District Health Sector Planning; International Medical Corps South Sudan as HIV/AIDS Program Manager/Health Coordinator; MSH – Ethiopia as Regional Technical Integration Advisor,;Visions in Action Uganda (Northern Uganda) as HIV/AIDS Team Leader; FHI – Ethiopia as Care and Treatment Officer and Dessie Regional Referral Hospital as General Medical Practitioner.
Dr. Asmamaw has research experience in the areas of HIV/AIDS, type 2 DM, podoconiosis, etc. Currently, he is working for WHO as a Notional Professional Officer for prevention and control of NCDs including the prevention and control of Non-Communicable Diseases, their risk factors, policy intervention, clinical interventions, and population-based interventions including for mental health.

Four discrete steps to quantify the value of an NCDs intervention include:

1. Estimate economic burden of NCDs (in ETB);
2. Estimate impact of intervention (number of people, percentage reduction in mortality and productivity);
3. Estimate cost of intervention (in ETB);
4. Quantify return on investment (ROI) of intervention (in ETB and percentage).

Major findings

In 2016, combined total costs of the four main NCDs (CVDs, cancers, diabetes and chronic respiratory diseases) in Ethiopia was estimated at ETB 31.1 billion (1.8% GDP), taking into consideration the health expenditures as well as the cost of absenteeism from work, presentism (reduced capacity at work) and losses for premature death.

The below figure showed that the Government health care expenditures represented only 14.06% of all NCDs-related costs, while the indirect economic losses are much higher than the direct losses.

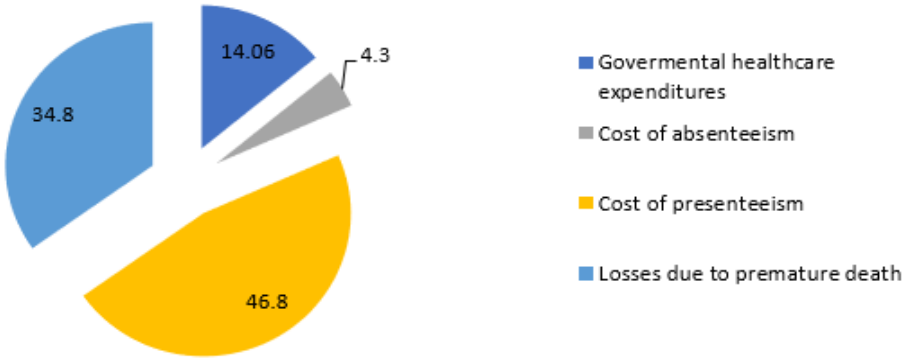


Fig. 6 Structure of the economic burden on NCDs in Ethiopia (source: Prevention and control of NCDs in Ethiopia: The Case for Investment).

Talking about the interventions able to advert the NCDs trend –see the below figure-, the study reveals that all interventions significantly reduce the number of lost to CVD-related causes, and, in particular, the salt interventions have a greater impact with 454.955 lives saved. Besides, the interventions also add healthy life years to the population, namely the clinical interventions for CVDs, the tobacco and salt packages prevent strokes and CVDs, thus the individuals avoid disabling states, which can increase pain and reduce mobility.

Intervention package	Strokes averted	Cardiovascular events averted	Mortality averted	Healthy life-years gained
CVD and diabetes clinical interventions	129 522	96 654	352 693	1 113 896
Tobacco interventions	142 045	109 084	220 080	968 284
Alcohol interventions	134 155	97 017	210 645	884 391
Physical activity interventions	130 466	98 471	209 030	873 171
Salt interventions	442 88	289 871	454 955	2 949 634

Tab. 4 Estimated health benefits over 15 years. (Source: Prevention and control of NCDs in Ethiopia: The Case for Investment)

Clinical interventions for CVDs accounted for most of the estimated costs, whilst the cheapest intervention resulted to be on salt reduction package, whereby the costs related to awareness campaign might be high, however various low-cost tobacco policies exist already, such as tobacco labelling.

Intervention type	Fifteen-year total
CVD and diabetes clinical package	221.39
Tobacco control package	2.83
Physical activity package	6.05
Salt reduction package	6.16

Tab. 5 Estimated costs of policy and clinical interventions over 15 years in billion ETB. (Source: Prevention and control of NCDs in Ethiopia: The Case for Investment)

Comparison of the costs and benefits of each intervention package shows that interventions to reduce the salt intake have the highest ROI of any intervention, as illustrated in the below table.

Intervention package	5 years	15 years
Tobacco	1.05	3.05
Alcohol	0.49	1.43
Physical activity	0.55	1.77
Salt	1.99	3.26
Clinical interventions for CVDs and diabetes	0.05	0.06

Tab. 6 ROI at 5 and 15 years, by intervention package in billion ETB. (Source: Prevention and control of NCDs in Ethiopia: The Case for Investment)

All prevention policy packages result in ROIs >1 and the clinical interventions package has an ROI <1. In conclusion, the policy packages (salt reduction, tobacco and alcohol control, physical activity) are the clear best buys from an economic perspective, offering the highest ROI over 15 years.

If the government invest in the five-policy package, it would save 1.4 million lives and give Ethiopian nearly seven additional years of health life over 15 years.

Furthermore, he elaborated that the economic burden of NCDs is a tip of an iceberg and, therefore, government health expenditure on NCD, which was equivalent to ETB 4.4 Billion, is the smallest portion of the biggest burden of the disease. The economic losses are mainly due to premature mortality (ETB 26.9 Billion) which is a hidden part of the NCDs burden. In other words, lack of investments in health and prevention will lead to enormous and unreturnable losses of working age population and workforce leading to economic losses.

Way forward

Dr. Assmamaw also discussed the following way forward based on the value of the investment case to advocate for NCDs actions and raise awareness on NCDs prevention and control supports in order to:

- Reach low middle-income country status by 2025, as envisioned under Ethiopia's GTP II;
- Realize the social development progress, including poverty and inequality reduction;
- Strengthen primary healthcare.

Besides the above considerations, Dr. Assmamaw stated, in order to strengthen multi-sectoral NCD policy responses the following should be considered in the future.

- Establish a new multi-sectoral coordination mechanism on NCDs and/or integrate into existing platforms (e.g. SDG action platform, nutrition, tobacco);
- Develop a costed national multi-sectoral plan;
- Incorporate NCDs into other national and sectoral health and development plans, including SDG frameworks and UN support documents.

Additionally, sustainable financing for health, UHC and development through Addis Ababa Action Agenda on financing for development, advancing ongoing dialogue and activities on other health taxes; expand taxes to other health-harming products (e.g. sugar-sweetened beverages, fast foods etc.).

On top of that, he highlighted to strengthen legislative and regular frameworks on salt by adopting the WHO SHAKE strategy; by fully implementing and enforcing the food and medicine administration proclamation number 1112/2019, which is tobacco and alcohol control law and by designing strategies to restrict/eliminate trans fats, reduce intake of saturated fats and sugar.

Other moving forward recommendations discussed by Dr. Assmamaw as next steps and building momentum were:

- Advance projects and partnerships on critical issues not covered, like air pollution, mental health, RTI and khat use.
- Expanding the existing initiatives like car-free days, increase physical activities and reduce air pollution.
- Assessing investment case with other stakeholders, agree on policy options and work with UNCT, civil society and donors.

Overall, the whole government should respond to NCDs burden in order to bring opportunities to the national development agenda and, in this regard, all sectors should play their role in the reduction of NCDs.

5.5. First day's discussion

Moderator: Mrs. Hiwot Solomon,
DPCD Director, MOH
Addis Ababa, Ethiopia

The floor was open for discussion and participants raised different questions and comments.

The major takeaways

- Ethiopia is currently using basic methodologies for screening and diagnosing cervical cancer. Modern key tests and technologies of identification of pre-cancerous lesions should be taken into consideration for the future. Poor documentation is a general issue in Ethiopia. **It is, therefore, important setting up a national NCD registry system (at least for the prioritized NCDs).** Currently, the process of strengthening the registry system has started in five regions and will be initiated soon in radiotherapy centers.

- **It is important to give further emphasis to the issue of triple burden of diseases, including sexual abuse and other injuries like fall and cut.** Even though the systematic review was enough to serve the commissions purpose, a meta-analysis for better policy formulation was recommendable.
  Expenditure data or program costs for NCDs should not be compared with standalone communicable disease like TB and Malaria. It is also worth noting that Skin diseases/lesions can be linked with NCDs management. For example, NCDs with skin cancer.

- In the NCDs strategic document, it was mentioned the importance of engagement of the NGOs (local or international) on the prevention, control and treatment of NCDs. Nonetheless, gaps are observed on report feedback mechanisms from government side. **Functional and regular reporting mechanisms will allow CSOs to better address NCDs management.**

- Given the extent of the problem in the Country, **asthma is considered as one of the chronic respiratory diseases under NCDs** and enough attention will be given to it in HSTP II. **However, in terms of prioritization, other diseases such as cardiovascular and DDs affect more the general population.**

- Regarding the combination of NCDs program with school health program, **the second priority strategy in the NSAP is health promotion and communication and this is implemented through school health program** on top of the health extension program.


RESERVED

6. DAY 2: 27 February 2020

6.1. Presentation #5: Looking for long term impact: Linking NCD with stunting

Mr. Abinet Tekele (MSc, PhD fellow)
Food and Nutrition Society of Ethiopia
Addis Abeba, Ethiopia

Mr. Abinet Tekle is an MSc graduate and Ph.D. fellow in nutrition with more than 14-years-experience in government, NGO and private sector. He worked as a researcher at EPHI and as senior program officer at Nutrition International. Besides, he worked as nutrition columnist and article contributor to a number of newspapers and magazines and founded and hosted 3 weekly health and nutrition radio shows over the last 10 years.
Currently he is working as an executive committee member and public relations officer for the Food and Nutrition Society of Ethiopia (FoNSE). He made significant contributions when FoNSE organized a number of annual conferences, with the most recent one being the African Epidemiological Conference held in Ethiopia in 2018 that focused on NCDs and other nutritional issues.
Mr. Abinet is a co-founder and CEO of NEED PLC which provides consultancy, counseling, and mass media commutation services to improve public health nutrition problems with special emphasis to NCDs. NEED hosts the first ever TV show in Ethiopia about NCD management through healthy lifestyle. Mr. Abinet is also the prestigious Mandela Washington Fellow of 2019 at Drake University.

EDHS data from 2000, 2005, 2011 and 2016 show that a there was a significant reduction of under five children malnutrition. Nevertheless, in 2016, stunting is at 38%, underweight at 24% and wasting at 10%. The 2019 Global Nutrition Report shows the presence of 3% coexistence of wasting and stunting in under five children of Ethiopia. Moreover, EDHS 2016 data depict that 8% and 3% of women and men, aged 15 -49, are found to be obese.

Major findings

The double burden of malnutrition in Ethiopia is illustrated in the figure below.

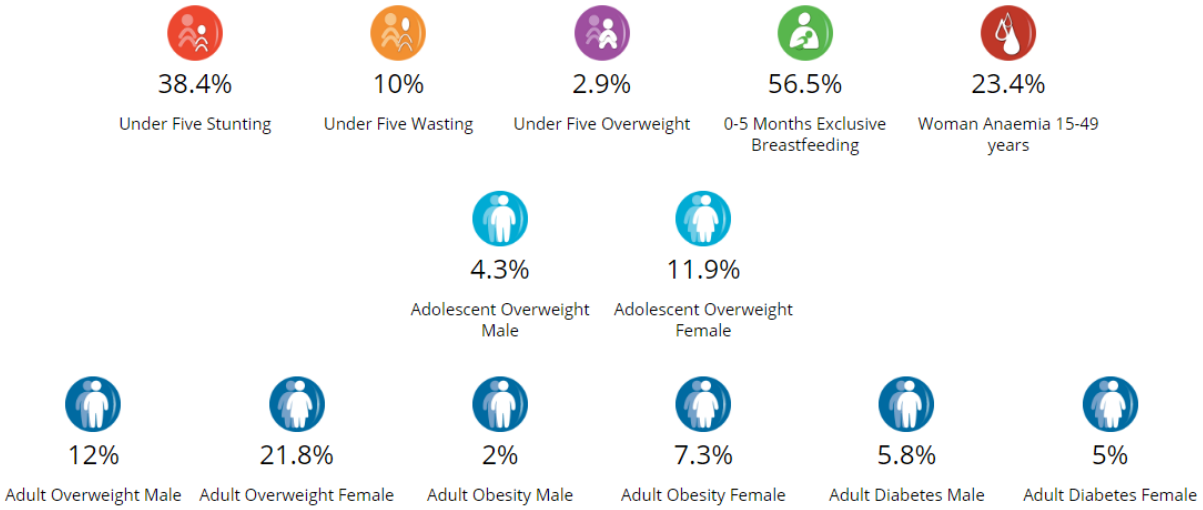


Fig. 7 The double burden of malnutrition in Ethiopia.

In Ethiopia, the NCD burden attributable to dietary and metabolic risks have increased. Poor maternal nutrition prior to and during pregnancy can lead to increased risk of maternal anemia, preterm birth and low infant birth weight; in turn, low birth weight infants can be at higher risk of metabolic diseases and abdominal adiposity later in life. Similarly, women who are overweight or experience excess weight gain during pregnancy are at a greater risk of gestational diabetes and larger infant birth weight, putting their offspring at higher risk of obesity later in life. Furthermore, accelerated weight gain early in life is associated with higher body mass index and obesity later in life.

Physical inactivity, unhealthy diet, harmful use of alcohol, and tobacco use were outlined as the main risk factors for NCDs. The GBD (Global Burden of Disease) study estimated that dietary factors were the leading NCD risk factors for both sexes accounting for 11.7% of the total NCD DALYs in 2016. Fruit and vegetable consumptions were reported to be low in Ethiopia, with > 98% of individuals with inadequate consumption. In 2015, Ethiopia ranked among the top four countries (of 15 Eastern SSA countries) in terms of mortality and DALYs based on the age-standardized proportion of disease attributable to dietary and metabolic risks.

The double burden of malnutrition costs the effectiveness and efficiency of investment in terms of time, energy, and resource and thus double and triple duty actions are required.

Way forward

Double duty actions could address undernutrition, obesity, and diet related NCDs while triple duty actions could tackle malnutrition and other development challenges that further could yield multiple benefits across the SDGs.

Some action items presented for **double duty actions** are as follows:

1. Promotion and protection of breastfeeding in the workplace. Children who are breastfed experience fewer infections and women who breastfeed reduce their risk of breast cancer.
2. City planning for safe, nutritious, and healthy diets (ex. building urban infrastructure to ensure access to affordable, safe, and nutritious foods in underserved areas, such as in slums).
3. Promoting the use of iodized salt along with limiting use of excessive salt intake for prevention of hypertension. This, will save WRA and children taking iodized salt from IDD and the total population at risk of hypertension from excessive intake of salt by.
4. Delivering universal healthcare packages by integrating undernutrition and diet-related NCD prevention (ex. nutritional counseling, treatment and monitoring).
5. Promotion of increased fruit and vegetable consumption from various sources including home and school gardening.
6. Costed, multispectral nutrition plans which contain double duty actions.

On the same note, the following points were proposed for **triple duty actions**:

1. Diversification of the food production landscape (ex. t ensuring the basis of a nutritious food supply essential to address undernutrition and prevent diet-related NCDs; enabling the

selection of micronutrient-rich crops, empowering women etc.).

2. School meal programs that ensure children are not unduly exposed to foods that increase risk of obesity, provide income to farmers, and encourage children to stay in school.

6.2. Presentation #6: Ethiopian community perception and reaction on NCD, Civil Society & Patients Point of View

Mr. Wondu Bekele Woldemariam, Executive Director Mathiwos Wondu-YeEthiopia Cancer Society; Focal Person, Consortium of Ethiopian NCD Associations/CENCDA

The Mathiwos Wondu-YeEthiopia Cancer Society (MWECS) focuses on the areas of childhood cancer care and support, breast and cervical cancer prevention, care and support, tobacco control and NCDI control. The cancer society is actively participating in NTWG & Cancer control and playing a leading role in areas of formation & management of CENCDA, as well as the preparation of National Cancer Control Plan, the National Childhood & Adolescent Cancer Control Plan, the Non-Communicable Diseases & Injury report, the Proclamation on Tobacco, Alcohol etc.

Mr. Wondu Bekele Woldemariam is a BA graduate in Government Affairs & a post graduate student in Development Management. He has more than 30 years of top management experience with several industries & has four years of experience as air traffic controller. He joined the war on NCDs in general & cancer in particular after he lost his son to blood cancer 15 years ago. He is one of the founding members of Mathiwos Wondu-YeEthiopia Cancer Society and is currently working as its Executive Director. He is also voluntarily working as a focal person for Consortium of Ethiopian NCD Associations/CENCDA/. The American Cancer Society in 2011 named him as Global Cancer Ambassador for Ethiopia in recognition of his contribution and leadership role in civil society cancer control in Ethiopia. Under Mr. Wondu's leadership, Mathiwos Wondu-YeEthiopia Cancer Society has played one of the leading roles in the development and implementation of the first strategic framework on NCDs and the development of National Cancer Control Plan and National Childhood & Adolescent Cancer Control Plan. Furthermore, the society supported EFDA to develop and to convince the Parliament to pass one of the strongest & toughest laws on tobacco & alcohol in Africa.

Major findings

He presented the NCDI Burden Situational Analysis by using data from the Global Burden of Disease (GBD) study that shows that 52% of the total mortality in 2016 in Ethiopia was due to NCDIs. According to NHA 6th report, 68% of NCDI services in Ethiopia were financed by out of pocket/OOP/ expenditures, the Government was responsible for nearly 30%, while the contribution of donors for these services was negligible at only 1%. An economic burden analysis shows that economic losses from NCDs (direct and indirect costs) make up ETB 31.3 billion per year, which is equivalent to 1.84% of Ethiopia's gross domestic product in 2017.

Challenges, gaps, expectations and unmet needs from the community's perspective were presented. Some of the gaps identified include low level of knowledge at the community level of NCDs & their risk factors, such as stigma and misconception about NCDs and stretched Primary Heath Care, due to several competing priorities. Specifically, in reference to the latter gap, only one cryotherapy machine and one trained nurse are available at the hospital level with frequent interruption of service delivery. Lack of budget, trained human resources at national and NCD treating health facility level, lack of psychosocial support, absence of CO_2 and frequent cryotherapy gun

breakage have affected cervical screening efforts. Moreover, many NCD medications are not frequently available at hospitals and local markets, often being unaffordable.

Furthermore, absence of lifelong follow-up and treatment, unwelcoming reception at health facilities and low-level of survival rate that discourages patients for further treatment were identified as challenges. It was added that many women in the community face additional problems as they require their husbands' consent to go for screening and treatment.

Way forward

The following points were suggested as recommendations and a way forward:

- Form NCDI Steering Committee chaired by the Prime Minister;
- Increase the national health budget from the present 6.7% to 15%;
- Advocate for earmarked ODA support for NCDs;
- Require for integration and decentralization of NCD services in the Primary Heath Care System;
- Partnership and Collaboration among development partners; and
- Concerted & continuous awareness creation as well as massive community mobilization.

> *There is the need to commit for the integration and the decentralization of NCD services in the Primary Health Care System.*

6.3. Presentation #7: Presentation on cervical cancer screening and treatment, Tigray experience

Mr. Gerezgiher Buruh,
Associate Professor, Mekelle University
Mekelle, Tigray

As part of the national strategy, Tigray Region has been working to achieve the goals set towards the prevention of cervical cancer through projects such as PATH-Eth (2010-2014), cervical cancer project - CECAP (2016-2017), and HPV infection and genotyping projects (2018-2019). In addition to cervical cancer screening and testing, the cervical cancer project was focusing on capacity building, site establishment, and awareness creation in the community. The summary project report revealed that about 12,348 women were screened since 2010.

Mr. Gerezgiher Buruh Abera is an Associate Professor in maternity and reproductive health and a PhD holder in Public Health on Cervical Cancer from the School of Nursing, College of Health Sciences, Mekelle University, with 11-years-experience in clinical and academic programs. He offers a wide range of academic services – school head, post graduate coordinator, member of promotion committee, instructor for undergraduate and post-graduate students and researcher. After a successful career in research, he won different prizes and received certificates of appreciation in areas of community service and leadership and management skills.
Gerezgiher Buruh Abera spent 5 years as cervical cancer project coordinator, cervical cancer trainer, supervisor, researcher and the NCD TAC establishment in Tigray region and Mekelle University. He published a total of 27 papers and 5 are on cervical cancer and HPV vaccination.

Major findings

Based on the researches, among the screened participants, 9.22% were positive for VIA, 1.37% were suspicious for cancer. An early sexual debut (<20 years of age) accounted for 87.4% of the participants. Other factors were considered associated to such as being divorced/widowed, farmers or housewife, and having STI history.

Program	Sites established	Training		Screening		
		Nurses	HEW	N	+ve (%)	Susp (%)
PATH-Eth (2010-2014)	7	---	---	4,036	457 (11.3%)	15 (1.37%)
CECAP (2016-2017)	17	68	---	3,866	374 (9.7%)	154 (3.98%)
TRHB (2018-2019)	52	104	123	4,446	307 (6.9%)	---
Total	76	172	123	12,348	1,138	169
Coverage	**29.6%**			**2.45%**	**9.22%**	**1.37%**

Tab. 7 Total regional achievement summary. NB: Service coverage includes HC and above (250). Eligible women for screening (5,128,532*0.098) – 502,596.

> *Early sexual debut (<20 years of age) has substantial association with definitive and suspicious cervical cancer cases.*

Results from the HPV infection and genotyping (2018 -2019) study showed that 24.3% were infected with any type HPV, 17.12% were infected with HR HPV and 10.36% with LR HPV.

Though the introduced HPV vaccination in Ethiopia is Gardasil, the prevalent genotypes in this finding were 16 and 31 for the high risk and 57 and 11 for the low-risk group as illustrated in the table below.

LR	freq	HR	freq	HR	freq
6	2	16	12	51	3
11	5	18	2	52	6
42	3	26	1	53	4
54	2	31	8	56	2
57	6	33	1	58	1
70	1	35	3	59	3
90	1	39	3	66	1
others	4	45	1	68	2

Tab. 8 Human papilloma Virus genotyping in Tigray region 2018.

Challenges from patient and professional perspective were also presented. Low community awareness, confusion between pre cancer and cancer and resources were client related challenges. On the other hand, trained professionals frequent turn over, work overload, shortage of equipment and infrastructure such as rooms for screening, and lack of proper follow-up were identified as professional related challenges.

Way forward

Through his presentation, Mr. Gerezgiher demonstrated how is essential studying the disease/virus in order to know it better and identify the appropriate treatment. In the same time, he validated the importance of organizing systematic awareness campaign for the targeted population and availing human resources as well as equipment at HFs. Furthermore, the associated factors require social protection actions.

6.4. Presentation #8: Experiences of Doctors with Africa CUAMM on cervical cancer screening and treatment project in South Omo Zone

Mr. Ademe Tsegaye (MPH, PhD fellow),
Head of Program
Doctors with Africa CUAMM
Addis Ababa, Ethiopia

Mr. Ademe Tsegaye Adgo has over fifteen years of experience in Public Health programs. He has wide experience in project monitoring and evaluation design, qualitative and quantitative data collection, training and oversight of data collectors and supervisors on large research projects, data quality assurance and analysis, and research report writing. After developing an extensive experience with Universities and different International NGOs as Monitoring and Evaluation Advisor, Ademe has been working for Doctors with Africa CUAMM as Head of Programme. Among the projects designed and supervised there are Participatory Learning and Action project, RMNCH projects, cervical cancer screening and treatment projects and TB/HIV/Viral Hepatitis projects.
Ademe has published seven research articles, six of which were published in peer-reviewed journals. He is a Senior Public Health Expert currently completing his PhD studies at the University of South Africa.

Doctors with Africa CUAMM's experiences on cervical cancer screening and treatment, and in particular projects in South Omo Zone, were presented. Major interventions included strengthening MNCH, ensuring access to quality MNCH services, cervical cancer prevention and treatment integrated with TB/HIV, prevention and treatment of Cervical Cancer and promotion of community integrate services.

Through the AICS funded KAppa project on cervical cancer prevention and treatment was implemented in six health facilities and aimed at providing cervical cancer screening and treatment. The project organized training for 36 HCWs on DM, HTN, HIV and TB, and the screening services were integrated and offered to the population for free. Moreover, various demand creation activities were carried out.

Major findings

During implementation period, it was possible to observe that in pastoralist and semi pastoralist area 5.7% were VIA positive, 11.4% had raised blood pressure, and 0.9% of individuals were found to be positive for HIV, and 5.1% were with DM. Two third of the service utilizers for HTN and DM screening were females.

Experiences on the integration of the cervical cancer screening with HIV/TB screening in pastoralist community (Hamer and Dasenech Districts of South Omo) were also shared. The project identified 8.4% VIA and 0.4% HIV positive women in Dasenech district and 5.9% VIA and 1.1% HIV positive women in Hamer District. Regarding community-based TB prevention and control activities, 231 TB outreach screening activities were conducted, 6,227 clients were screened for TB, out of which 1,588 were found with presumptive signs and symptoms of TB and 93 (5.9%) were actually found with TB and hence put-on treatment.

Challenges, opportunities and possible suggestions for future implementation were presented. The project faced persistent gaps on the integration of services especially in

intra-facility referral linkage, cervical cancer room location and integration of breast cancer screening. Moreover, there were challenges on awareness raising activities and service utilization due to logistics and financial constraint for outreach, exasperated by high-trained staff turnover.

~~Mr. Ademe, additionally, emphasized that the~~ already mentioned risk factors for DM and HPN are not common in the pastoralist area, and the data collected during Kappa Project time were completely unexpected.

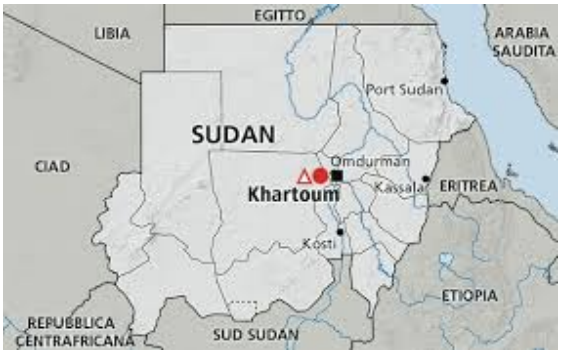
Way forward

As a way forward, repeated refreshment trainings, regular inspection and on time maintenance of cryotherapy machines, availability of full CO_2 cylinders and thermos coagulation should be considered. Continuous follow-up services for VIA positives and regular screening services for raised blood pressure and elevated blood glucose should not be campaigned based, but provided as routine service.

> *"The magnitude of the problem in Pastoralist and Semi Pastoralist area is significant (5.7 % VIA positive). Therefore, targeted awareness creation is an entry point for NCD intervention."*

6.5. Presentation #9: Family Medicine Experience from Sudan

Dr. Osama Elshafie Sirelkhatim,
Head of Family Medicine Program
PHI- FMOH of Sudan
Khartoum, Sudan



Dr. Osama Elshafie is a graduate of M.B.B.S Faculty of Medicine – Islamic University of Kordofan and received a certificate of full registration from Sudan medical council. He has also certification of fellowship of family medicine from the Egyptian board and membership of Royal College of General Practitioner MRCGP (INT). Moreover, he received certification of specialist and registration from the Sudan Medical Council. He participated in the Family Health Policy document writing and the operational plan for universal health coverage. He is responsible for the NCD clinic at Ribat Police Hospital. Currently, he is working at Khartoum – Federal Ministry of Health, Directorate of Human Resource Development as Director of Family Medicine Program of the Public Health Institute. He is also a Consultant & Trainer of Family Medicine and President of Family Medicine Council at the Sudanese Medical Specialist Board. He used to be Head of training committee in the Sudanese Medical Specialist Board and a part time lecturer and trainer of family medicine at Alzaeim Alazhary University.

The NCDs burden in Sudan

The burden of NCDs in Sudan is high and is expected to increase in the future. Attributable risk factors include high prevalence of tobacco use, unhealthy diet, lack of physical activity, harmful consumption of alcohol and the increasing health care costs. On top of these risk factors, the Country's health system also faces challenges related to political conflicts in certain states, brain drain, shortage of skilled workforce, lack of expertise in NCD prevention and control and of essential standards of health care for people with chronic diseases, increasing costs of health services, and absence of trainers, as well as training institutions and slots.

There is a need for an integrated healthcare system offering cost-effective and evidence-based interventions. Moreover, the tools to prevent and control various NCDs (such as health promotion and primary prevention, early detection and management, and surveillance to monitor trends in risk factors and diseases) should be delivered in an integrated manner through the existing health system in the country in order to reduce exposure to risk factors. This is feasible, but would require a paradigm shift.

A family health approach to service delivery is justifiable not only from a cost-effectiveness perspective but also from the equity and social justice angle. It can lead to provision of services that are coherent, uniform, and of quality, which would help to enhance the motivation, skills and the competence of health care workers.

> *Integrating NCDs as part of primary health care can assist in managing NCDs at an early stage.*

Early detection and prevention of NCDs are a better investment than diagnosing and managing them at a later stage, when it can be expensive. In addition, on a long-term basis, investing in NCD prevention and control through evidence-based approaches can contribute to strengthening the health system.

He further elaborated the idea that NCD prevention and control program should be implemented through the health system based on PHC.

The Family Health Approach (FHA) in Sudan

Dr. Osama shared the experience on the Family Health Approach implemented by the Sudanese Federal Ministry of Health in order to reach Universal Health Coverage (UHC). The health reform, aiming at reaching the UNHC, has the purpose of providing full coverage of the whole country with competent family physicians and family health cadres working in appropriate settings, as gatekeepers for the health system. To this end, in order to reach UHC through FHA, Sudan had created family health and health finance policies followed by an operational plan for implementation (see the below table). Family Medicine will be the first point of entry to the services provided by the Sudanese healthcare system.

Furthermore, Dr. Osama shared the experience of Sudan on the DICTORNA program, family medicine in Khartoum, Red sea, Kassala and Gedaref States. The Program, financed by the Italian Agency for Development Cooperation Office in Khartoum, aimed at strengthening the Primary Health Care System for the establishment of Family Medicine and supporting the National Health Insurance system. The implementation framework is based on how the project is functioning on governance, resources, and capacity building, organizing the family health services and financing.

Governing documents	Governing structure
1. Family health & finance policy	1. UHC Committee
2. Operational for UHC	2. Family health and finance council
3. IM manual according to benefit package	3. Family Health Department at Federal Level
4. Standards of FHC & FHU	4. Health Department at State Level
5. Standards of FHR & HIS	5. States Council for the coordination of health services

Tab. 9 NCDs governance within the FHA.

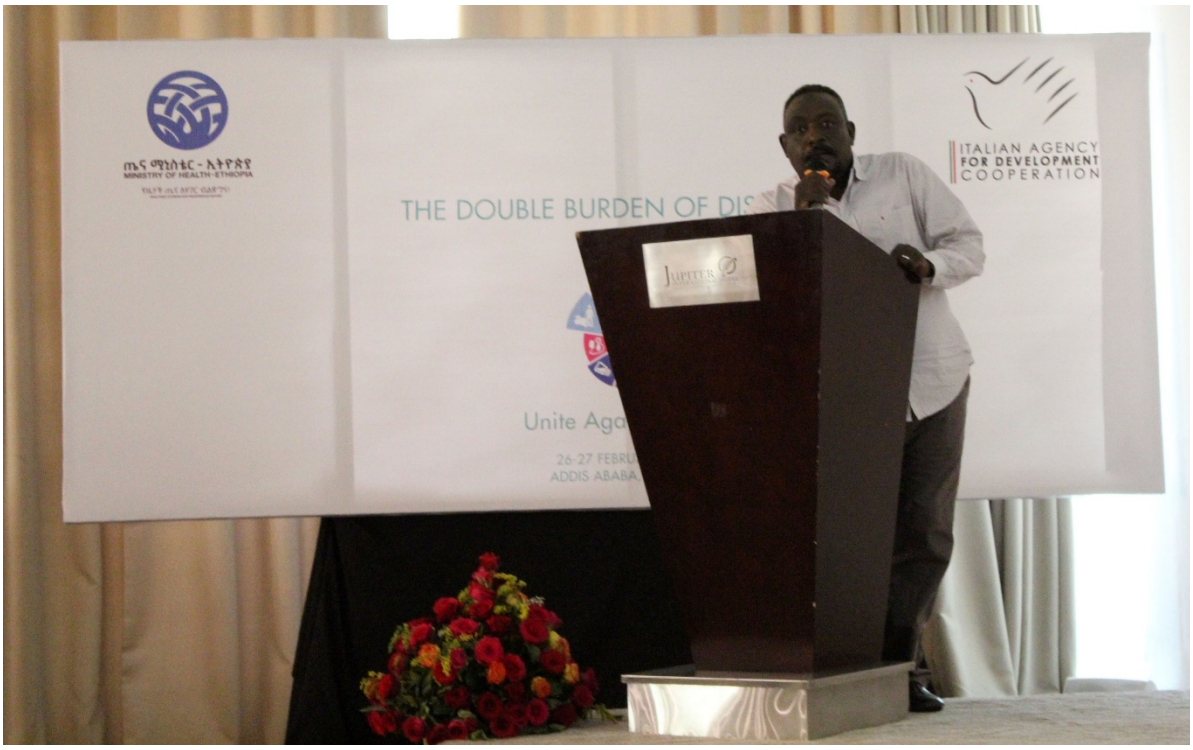
Operationally the FHA required a capacity building intervention in order to build critical mass of family health care (Family Physician, Medical Assistant, Community Health Worker), whose training has been organized by Sudan Medical Specialization Board (SMSB). While the e-learning system is organized by Public Health Institute (PHI) together with flying faculty to different states due to scarcity of family medicine trainers.

In the same time, there was the need to build the institutional capacity of key implementers of the family health policy and finance, such as PHI, PHC and MoH staff, and the rehabilitation/construction of new FHCs and FHUs.

Moreover, concerning the financing, a finance pooling and purchasing system has been established within the National Health Insurance Fund.

Best practice sharing

Finally, Dr. Osama concluded his presentation by showing how Family Medicine initiative helped on the prevention and control of NCD by taking an example of DM. According to him, 7% of the Sudanese is affected by DM and it reaches beyond 10% in the capital Khartoum. Well-trained family medicine cadre through scheduled FMOH & partners programs performs preventive activities & initiatives. To this end, the AICS Office in Khartoum is a partner of an important initiative that is part of the WHO Global Program called "Be Mobile be healthy. The initiative is entitled "mHealth – m-Diabetes" and aimed at promoting the use of new technologies related to mobile communications and Internet for prevention and promotion of the treatment of chronic diseases, especially the DM. The web portal/ dashboard was developed including Short Message Services (SMS) management and scheduling, whose content regards diabetes information based on latest evidence considering the local context and culture.



6.6. Presentation #10: NCDs in Palestine, AICS perspective

Ms. Cristina Natoli
Head, AICS – Jerusalem Office
Palestine

Ms. Cristina Natoli, with a University degree in International Political Science, has more than 30 years of experience in International Cooperation.
Since 2016 Ms. Natoli is the Representative of the Italian Agency for Development Cooperation (AICS) in Jerusalem, for the occupied Palestinian territories. She previously worked as representative of AICS in Tunisia, Libya and Morocco based in Tunis Office (2013 to 2016). Earlier, she spent around 30 years working as an expert at the Directorate General for Development Cooperation (DGCS) of the Italian Ministry of Foreign Affairs and International Cooperation (MAECI) in Rome, Italy.
Ms. Natoli ensured AICS commitment in achieving relevant results in partnership with the Palestinian Ministry of Health, including among many others, the prevention and control of Non-Communicable Chronic Diseases, in line with the Palestinian National Agenda 2017-2022. As a result of that, AICS Jerusalem is the lead donor for Health Care sector in the framework of the European Joint Strategy, and co-chair with the Ministry of Health at the LACS (Local Aid Coordination Secretariat) Health Working Group in Palestine.

The NCDs burden in Palestine

Data show that 68.9 percent of death in the Palestinian territories from the total deaths in 2018 is due to NCDs. The Palestinian territories have a total population of 4.8 million with life expectancy of about 73.9 years. Regarding the NCDs mortality, as illustrated in the below table, the deaths related to CVDs accounted to 31.5% in 2018, followed by cancer and cerebrovascular diseases. The overall NCDs deaths reached the 68.9% from all deaths.

Indicators (source Palestinian Central Bureau of Statistics)	In 2018
Reported Cancer incidence rate (per 100,00 pop)	117.7
Reported Diabetes Mellitus incidence rate (per 100,00 pop)	210.7
% Reported Cardiovascular deaths from all deaths	31.5%
% Reported Cancer deaths from all deaths	15.4%
% Reported Cerebrovascular deaths from all deaths	13.0 %
% Reported Diabetes Mellitus deaths from all deaths	7.5 %
% Reported Chronic Obstructive Pulmonary Disease deaths from all deaths	1.2 %
% Reported Bronchial Asthma deaths from all deaths	0.3 %
TOTAL % of reported NCDs deaths from all deaths	**68.9 %**

Tab.10 NCDs data in Palestine (source: Palestinian Central Bureau of statistics).

The AICS action against NCDs

AICS initiatives in Palestine with NCDs component have a total value of about EURO 41 million (about Euro 31 million in grant and Euro 10 million as soft loan) and are based on the priorities set by Palestinian Authority (PA), MoH, PA National Strategic Plan 2017-22 and EU Joint strategy and Programming.

The assistance to the Palestinian health sector is either through bilateral or multilateral channels or through projects implemented by NGOs or emergency programs. AICS Jerusalem is following a comprehensive and integrated approach offering different packages of services on the prevention and control of NCDs like prevention, education, infrastructures, medical supplies procurement, integrated initiatives, and governance.

Regarding **prevention**, different workshops have been organized on smoking, healthy lifestyles, nutrition, diabetes and cancer. Similarly, national and international conferences were also organized on NCDs, disability, breast cancer and nutrition (ex. salt reduction in bread). On the other hand, TV interviews were organized with high-level policy makers and religious leaders on NCDs topics. Furthermore, advocacy works were done for specific legislations related to tobacco control and salt reduction. As a result, the cabinet approved instructions and bylaws for tobacco control while the Palestinian Standards Institute approved technical specifications for salt reduction. Moreover, researches were supporting on evidence generation with studies like "Salt and sugar in Palestinian bread" which was carried out on 880 bakeries.

On the other hand, different community awareness activities were conducted to promote healthy behavior and lifestyle, as well as different trainings on prevention of NCDs focusing on diabetes, hypertension, nutrition, smoking and breast cancer. Moreover, other trainings were organized on psychosocial rehabilitation to hospital health workers, early detection of breast cancer and pesticides detection in food. ToTs were also given to support Family Medicine approach and mental health program in PHC clinics. AICS Jerusalem has also supported the production and printing of educational material on NCDs (posters, leaflets, booklets, role up materials, etc.).

The AICS Jerusalem project was reinforcing Primary Health Care system and strengthening the network of services for NCD patients through design and **construction of new health facilities** in different districts of the West Bank.

Regarding **medical supplies procurement**, different diagnostic machines were procured to strengthen services dedicated to diagnosis and treatment of NCDs. The project was also providing different drugs (CV diseases, kidney failure, MS) to MOH of Palestine and special formula for babies with congenital diseases. AICS Jerusalem works also in collaboration

with WHO to support the MoH in its activities related to health system strengthening in order to reach Universal Health Coverage by focusing on the **Health Information System**, **cancer registry and Family Practice approach** in the West Bank and Gaza. Likewise, it works in collaboration with UNRWA on comprehensive primary health care interventions that include preventive care and curative care of acute and chronic patients (SAGA Program). Moreover, there is a collaboration with the EU initiative (PEGASE) on direct financial support on referral of patients, covering salaries of health staff personnel and supporting facilities on their recurrent costs

As part of **governance**, AICS Jerusalem established a close collaboration with the Palestinian Government and Ministry of Health to prioritize interventions on NCDs, strengthen the policy dialogue and develop guidelines (i.e.: NCDs guidelines according to the WHO-PEN approach - Package of Essential Intervention for NCDs - adopted and implemented by MoH in PHCs, breast cancer management guidelines). AICS also co-chairs the LACS (Local Aid Coordination Structure) Health Sector Group.

Challenges

The main challenges in the implementation of various AICS related projects are as follows.

- Palestinian financial crisis affecting the Health sector (i.e.: shortages of drugs, reduced health workers salaries, unsustainable referrals costs, etc.)
- Humanitarian assistance needs are increasing yearly. At the same time, Donors funding the health sector development remains insufficient;
- Finalization of health sector priorities definition and planning process;
- Development of an updated hospitals master plan;
- Nationalization of health services (referrals to non-governmental hospitals);
- Issues about Gaza Entry/Exit patients and medical staff permits emission;
- Human rights violations affecting health services access and provision;
- Lack of mental health and psychosocial support services.

> *The implementation of NCD programs might be challenging in emergency settings or where insecurity and damaged health systems may impair access to services, but not impossible if political commitment is strong.*

6.7. Second day's discussion

Moderator: Dr. Kunuz Abdella
DPCD, MOH
Addis Ababa, Ethiopia

After a brief summary of the six presentations from the second day, comments and questions were collected from workshop participants and different issues were brought up to discussion.

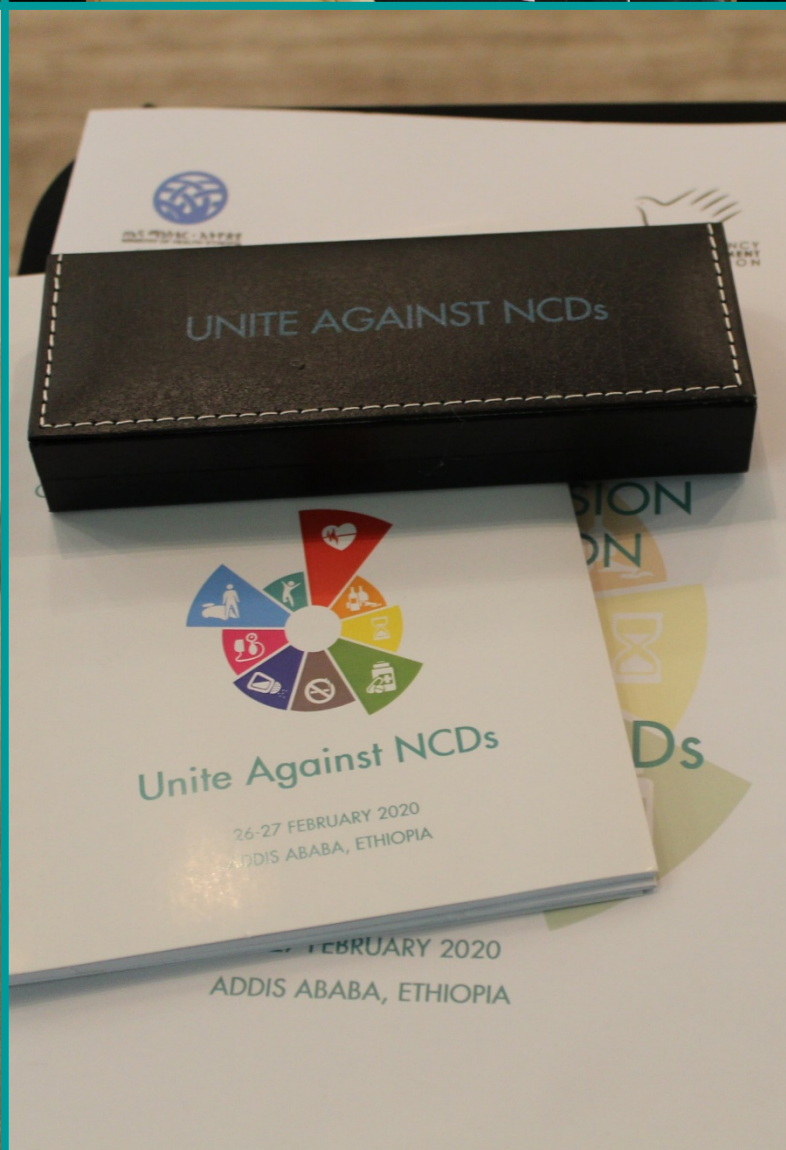
The major takeaways from the discussions can be summarized as follows:

- **Even though 2/3 of all deaths around the world and 1/2 in Ethiopia are caused by NCDs, NCD programs have received little attention and funding.** Even though some countries have moved forward in the development of NCD national strategies and guidelines, they have not effectively funded or implemented them.

- **The implementation of NCD programs might be challenging in emergency settings or where insecurity and damaged health systems may impair access to services, but not impossible if political commitment is strong.** Ethiopia can for example learn from the Palestinian experience that commitment is an important component to reach beneficiaries.

- **Target group awareness creation is an entry point for NCD program for both service providers and the clients.**

- **Diet is the leading cause and risk factor (12% with respect to other risk factors) for NCDs.** Malnutrition and adulteration of food items contribute a lot and should be considered in the prevention and treatment of NCDs. **The best way to implement NCD programs is by reaching the lower level of the system.** Be it family health care or primary health care, they have proven to be the best approach for the prevention and control of NCDs. The traditional way of addressing NCDs at tertiary level has not given satisfactory results.


UNITE AGAINST NCDs
Unite Against NCDs
26-27 FEBRUARY 2020
ADDIS ABABA, ETHIOPIA

6.8. Panel discussion

Moderator: Dr. Kunuz Abdella,
DPCD, MOH
Addis Ababa, Ethiopia

Panelists:

- Dr. Yekoyesew Work, MOH, Director General
- Prof. Kebede Oli, Land Mark Hospital, CEO
- Dr. Awoke Misganaw, EPHI, Advisor and Researcher
- Solomon Abdella, MOH, Pharmaceutical and supply chain case team coordinator
- Dr. Helen Yifter, Tikur Anbessa Hospital, Academic Director
- Andarge Abie, MOH HCF Advisor

The Panel Discussion focused on the prevention and management of NCDs from the perspective of:

1. National context/ policy direction/Health services
2. Public-private partnership (PPP)
3. Research institution/ CSO/ Academia and
4. Finance/ Supply chain management

Dr. Yekoyesew Worku Belete is a passionate public health specialist with medical doctorate degree background. He graduated with honors from the University of Gondar, Ethiopia with both Medicine and Public Health. He has worked as a senior health systems advisor for different non-governmental organizations both in Ethiopia and abroad.
Dr. Yekoyesew is currently working for the Ministry of Health of Ethiopia as Director General of Operations wing and Chief of Staff for the Minister. He is a strong advocate for evidence for decision making and people's ownership of their own health.
Simplicity is Dr. Yekoyesew's life principle and believes 'Goodness is what everyone has within when created to shine to self and the world'.

Prof. Kebede Oli Ayana, CEO of Landmark General Hospital, Addis Ababa, Professor of Medicine, MBBS specialist in internal Medicine, fellow in Clinical Cardiology, Master of Medical Sciences. His professional experience includes: Dean of Faculty of Medicine, Addis Ababa University; Founder and Head of the cardiology Unit at Addis Ababa University; Director of the Clinical Epidemiology Unit, (inter departmental research unit of the Faculty of Medicine, Addis Ababa University); Chairman of Editorial Board of Ethiopian Medical Journal; Reviewer of African Journal of Cardiology; Director of Axum and Jimma Hospitals and Co-founder of the private Noble Higher Clinic (one of the first and largest private clinics in Addis Ababa).
Prof. Kebede is widely recognized for evidence-based medical practice among colleagues and the public for excellence in clinical practice, ethics and empathy.
In his clinical research: he has been chairperson and active member of the department research committee for several years. He participated in the estimation of national burden of rheumatic heart disease. He also described the early phase of ischemic heart disease epidemic particularly in Addis Ababa. He has more than 20 different publications in different journals in areas of the burden of rheumatic heart disease in Ethiopia, specific features of rheumatic heart disease in Ethiopia, start of epidemiologic transitions as depicted by emergence of ischemic heart disease in Ethiopia.

Dr. Awoke Misganaw Temesgen is a Clinical Assistant Professor at the Institute for Health Metrics and Evaluation (IHME) at the University of Washington, leading burden of disease collaborative initiative between IHME and Ethiopian Public Health Institute (EPHI). He is a member of Global Burden of Disease Scientific Council. He has an MPH, a PhD in Public Health and completed Post-Graduate Fellowship at the University of Washington.

Currently, Dr. Awoke is an advisor for the National Data Management Center (NDMC) and a Principal Investigator for the collaborative research project between IHME and EPHI. His interests include sub-national BOD analysis, causes of death, NCD and their risk factors, data science and system in resource poor settings and build data system and analytic capacity, networking and collaboration, and translating evidence to health policy. He has been working as lecturer, advisor and researcher at different academic institutions and worked at different health institutions.

Dr. Awoke has been a speaker and a presenter in more than 15 international and local conferences/symposiums and has published more than 50 original articles on peer-reviewed journals and contributed to 7 guidelines, books, and book chapters, presented in more than ten international and national symposia, wrote more than seven non-refereed published scholarly publications.

Mr. Andarge Abie is a graduate of Public Health and a PhD Candidate in Public Health. Currently, he is working at the Ministry of Health with a capacity of resource mobilization and health care financing advisor. Previously, he was working as a project manager for cervical cancer screening and treatment project which mainly focused on screening of rural women for precancerous lesion and treatment. Furthermore, he was a field program manager, project coordinator and health service provider with a total service year of 15 years.

He has published an article entitled "Is Ethiopia receiving more resources from international donors compared to other Sub-Saharan African Countries?" and has contributed to the seventh National Health Account Survey (NHA 7).

Mr. Solomon Abdellah Muktar is a pharmacist with 10 years-experience in hospital pharmacy practice and administration, and national health logistics management. Solomon is responsible for a wide range of programs and services – such as selection, quantification and following pipeline and distribution of NCD medicines. He specialized in pharmaceuticals supply chain management and has been working in complex health systems and national coordination positions. After a successful career as logistics management case team coordinator, Mr. Solomon now coaches other people to achieve the same success.

Mr. Solomon is no stranger to NCD medicines management. He spent about 2 years as a logistics management case team coordinator in general and NCD pharmaceuticals coordinator in particular at MoH.

Dr. Helen Yifter Bitew is an Assistant Professor of Medicine at the department of Internal Medicine, College of Health Sciences, Addis Ababs University. She is a consultant Internist and Endocrinologist at the Tikur Anbessa Hospital. She graduated from Gondar College of Health Sciences with the honor of Best Medical student. She completed her postgraduate studies in Internal Medicine and Fellowship in Endocrinology at AAU.

Currently she holds a position of Director for Academic affairs, College of Health Sciences, AAU overlooking the operations of over 120 academic programs. She completed an International Inter-professional Wound Care course, following which she established and is leading the first and only foot care service in the country at the diabetes center of Tikur Anbessa Hospital. She completed a two-year MEPI-JF research scholarship training program and she is a board member of the Ethiopian Diabetes Association. She used to be an executive member of the Ethiopian Medical Association and Ethiopian Society of Internal Medicine.

Dr. Helen is organizing primary care for Non-Communicable Diseases, diabetes and diabetes complication prevention research and medical education and a Principal Investigator of an ongoing thematic research titled 'Improving Detection and Management of Non-Communicable Disease in Primary Health Care Units in Addis Ababa, Ethiopia'.

The moderator Dr. Kunuz, introduced the session by stating that 52% of the patients visiting health facilities in the country die due to NCD, and handed the floor to **Dr. Yekoyesew Worku to explain the policy direction of MOH to tackle these apprising problems in the country.**

- Dr. Yekoyesew recognized the importance of addressing the issue at policy level as half of the deaths being reported is due to NCD. The study conducted from 1990 to 2015 demonstrated that death due to NCD has reduced but it is still one of the major death factors. The country has only one health policy with its associated national health strategies. NCD is one of the major strategies within this health policy. For the implementation of the actual strategies, it follows the magnitude of information that comes to the attention of the Ministry.

Regarding the implementation of the aforementioned policy and strategies, a country is being evaluated by the level of decision making based on generated evidence (capturing morbidity and mortality data) and having a strategic action plan (including high impact interventions in order to prevent, promote, cure and rehabilitate). Furthermore, actual implementation (provision of integrated and quality services, reducing demand and acting on harmful use of products or food items) could be taken as another measure to alleviate problems related to NCDs.

All the above-mentioned strategies are captured in the Health Sector Transformation Plan, even though, all the interventions quantified in the HSTP document have not been implemented. On the other hand, the national NCD strategic plan is on its final stage. As part of this strategic plan, actual measures/interventions of quality care are being integrated and the country is trying to catch up with the backlogs. From policy and strategic point of view and according to WHO recommendation, Ethiopia is the leading country in sub-Saharan Africa capable of tackling NCDs in the future.

In terms of policy interventions, tobacco control, reduction of alcohol consumption and

introduction of physical activities are considered positive directions with the purpose of prevention. Yet, the MoH intervention is weak concerning the control of trans-fats, sugary beverages and Khat consumption.

In his turn, **Mr. Andarge Abie explained the historical background of the health care financing strategy that was developed in 1998.** For a couple of decades, the Ministry implemented the Health Care Financing (HCF) strategy to mobilize resources and currently this strategy is under revision because not all areas are well financed. The revision will allow to mobilize more resources to the health sector. The current HCF has five strategic objectives:

1. Mobilize adequate resources, through traditional and innovative approaches, from domestic and external sources;
2. Reduce out-of-pocket spending at the point of use;
3. Enhance efficiency and effectiveness;
4. Strengthen public private partnership;
5. Capacity development for improved health care financing.

Furthermore, the channels on how development partners are putting their fund (earmarked or unremarked) to finance the health sector were cited. Ex. GF for HIV, TB and malaria, SDG/PFetc.

Dr. Yekoyesew added that the overall allocation of finance to the health system is way below the standard, i.e. below 5%.

Enforcement of policies to control/limit unhealthy practices like adding excise tax on tobacco, alcohol etc. will avail additional resources to the health sector. There is a huge gap in terms of finance for those who have already acquired the diseases so, the collected amount from the different taxes should go for these priority groups.

What are the data and how complete is the information on NCD prevention, control, treatment and management? How much information is coming from the private sector? Is there a systematic collection of data from all sectors?

Dr. Awoke Misganaw replied that there are various challenges related to data collections and analysis, quality and completeness of data being the major one. There is still no established system to collect more information on morbidity, mortality, and other pertinent information from private health facilities. The approach needs to be more comprehensive by compiling information both from the private and public facilities. He described that on the GBD study, 47,000 deaths were reported of which the majority were registered from private health facilities However, private facilities are not interested in reporting mortality.

What has been the roll of CSOs to tackle these upcoming problems?

CSOs are partners that close the gap between the state/government, the market and the public. They work for the sake of the community, advocate for patients' rights, watchdog for the community and provide appropriate service where there are gaps. Dr. Helen Yifter mentioned that the concern for NCDs at global level was initiated by 2011 at a UN high-level meeting and then considered as one of the goals of SDG. There are several CSOs within the country and one of them is the Diabetic Association established in 1984 as a patient-based association with 3,500 member patients (type-I DM) and 57 branches across the country. The Diabetic Association has projects in 12 hospitals and it is involved in the provision of trainings (screening method) and equipment. The association also focuses on public awareness creation, development of

biannual publications on how to care for patients, patient support group through lobbying patients and advocating to the parliament on how NCD is affecting the public. To strengthen and stand together, an NCD consortium was established in 2012 comprising Diabetic and Heart Associations, Mathiwos Wondu YeEthiopia Cancer Society, etc. The consortium was closely working with MOH and functioning as a technical assistant on the design and development of the National Strategic Plan for NCDs in 2014. However, Dr. Helen mentioned that there were various challenges in the CSOs including leadership gap, investment gap 3D- (data, dialogue, decision) care gap across the nation, underfunding (most of the associations are patient based and look forward for resources generated from abroad which require the development of project proposals for which the association has limited capacity).

- The representative of Mathiwos Wondu YeEthiopia Cancer Society seconded Dr. Helen's view by reiterating that the majority of the associations (including the consortium, Heart association, cancer society, etc....) does not have an office. He also compared the situation with India by saying that CSOs are supported by the government, contrary to what is happening in this country. On top of that, the government is not trusting CSOs. Public facilities do not have adequate drugs and appropriate diagnostic facilities that patients should get. Therefore, CSOs need to stand together to tackle the problems, as well as to generate more funds to CSOs.

- Dr. Osama from Sudan also raised a point related to policy and asked if it is only the responsibility of MOH or other institutions are involved in the NCDs management.

- Other participant asked questions related to HR for NCDs. He questioned how the training institutions and the academia can integrate the local protocols and guidelines to fit into the local context. Besides, there is high turnover of professionals who got in-service training for NCDs without helping the community for a significant period.

- Other participant also raised concerns regarding the inclusion of taxes like sin tax, and excise tax on cars since vehicles cause injuries. He also thanked to the Prime Minister for the inclusion of excise tax. Furthermore, he pointed out the issue on how sectors can integrate (like MOH with MOE and academia). Finally, he stressed the economic burden of the NCDs on the poor stating it as catastrophic which leads them to impoverishment.

With respect to CSO roles and their collaboration with the government, Dr. Yekoyesew acknowledged the need for a better collaboration and added that a frank and genuine objective and result based relationship and discussion is fundamental. It is important to join hands together to come up with solutions to the problem as the MOH cannot manage everything by itself. However, he underlined that there were some critical capacity gaps of CSOs.

He stressed investment gaps, innovation gaps and lack of multisector approach to be the major problems that hinder NCDs management.

Moreover, he reiterated that, trust between private and public health institutions has to be in place and invited CSOs to join the management of the MOH for a concerted effort.

Regarding HRH, Dr. Helen remarked that core competency of the health professionals cannot be neglected, and in-service training

is crucially important in every aspect. There is an intensive movement of health professionals and it requires an intensive effort to reduce high turnover of the healthcare staff.

On his part, **Prof. Kebede added that human resource development comes from a standard institutional practice and training at schools/universities does not alone bring significant change.**

Mr. Andarge reacted to the question related to finance. He highlighted that in order to mobilize adequate domestic resources the government uses different options of taxation that will support the effort of the Ministry to curb the growing problems of NCDs including tobacco and alcohol use. Technological improvement and innovative financing will be crucial to support this effort. On the other hand, in order to solve the economic burden of NCDs on the more economically disadvantaged population, which leads them to further economic difficulties, a fee waiver system is in place to support the community to access service delivery particularly for NCDs drugs. The MOH is currently conducting case scenario analysis with the pharmaceutical supply agency and it is identifying essential and non-costly drugs.

Concerning the pharmaceutical supply management, Mr. Solomon gave a background information on the pharmaceutical and drug supply system where he explained that in 2007, the MOH established the Pharmaceutical Agency, replacing the then PHARMID in order to integrate the pharmaceutical logistic management system. He acknowledged that access to drugs and supplies continues to be a challenge and that people are travelling long distances to secure cancer drugs and others. Now days, there is some improvement but the majority of NCD drugs are still being obtained through out-of-pocket payment.

On the same topic, Dr. Helen added that EPSA is reducing the list of medications that tertiary hospitals are expected to procure due to shortage of budget. This increased drug availability but created frequent stock-out, besides the reduction of medication from the drug list remains a challenge for tertiary hospitals to treat NCDs.

How can we make our health system responsive?

Dr. Yekoyesew stressed that everyone has a role to play and it should not solely be the responsibility of the MOH and that development politics has to dominate. He added that improving the health system HR capacity is very important and the scope of practice should be in line with pre-service. Currently, 20% of the total budget of the Ministry is allocated for pre- service training which is not the direct mandate of the MoH and it is not profitable. On the other hand, regarding in-service training implemented by other Sub-Saharan countries have proved to be inefficient; therefore, the Ethiopian MOH is working hard to redirect the in-service training by initiating CPD (Continuous Professional Development).

Regarding health infrastructure, there is a huge investment in primary hospitals, which should be integrated, with other health infrastructure investments. There are around 20,000 HPs in the country but not all of them may be contributing to NCDs as expected.

On top of health infrastructure investments, the health system has programs such as the Essential Health Service Package which helps in deciding what service should be given to whom and by whom. Everyone has a bare minimum contribution to improve the health system, including NCDs management.

Similarly, ICT and diagnostics should follow the minimum health service package.

Concerning pharmaceuticals and the supply chain, Dr. Yekoyesew stated that it is the most difficult part as it is underfunded and it is costly. Presently, there is a need for international advocacy in containing drug price. Problems associated with NCDs have to be the agenda as investing on NCDs requires a big asset and intensive development of the country.

In conclusion, **the panelists emphasized that the MOH is on the right track in managing NCDs, but it has to build on the achieved successes and to invest in the management in order to improve the service delivery.**

7. RECOMMENDATIONS

1. **The rise of Non-Communicable Diseases in Ethiopia requires a multi-sectoral response for their prevention and control.** There is a need for higher engagement of different sectors and stakeholders through the establishment of effective and efficient structures at national and regional levels (ex. inter-ministerial and/or parliamentary committees). Moreover, barriers to multi-sectoral actions such as lack of awareness in different sectors, low political commitment, poor coordination among stakeholders and inadequate resources should be tackled.
2. **Governments should integrate NCDs as part of primary health care.** The Government can facilitate in managing NCDs at an early stage and, therefore, it is a less expensive investment than diagnosing and managing them at a later stage. Investments on NCDs prevention and control should also be done through evidence-based approaches so as to contribute to the strengthening of the health system on the long run.
3. NCDs remain one of the most underfunded programs. Nevertheless, considering the depth and magnitude of the problem and considering that it is currently on the rise, **adequate resources should be mobilized to increase budgetary allocations for addressing these diseases**.
4. Civil Society Organizations (CSOs) have long contributed towards reaching public health goals and they continue to have an important role in service delivery, awareness creation, advocacy, monitoring and accountability. There is, therefore, a need to strengthen CSOs engagement and actions in the prevention and control of NCDs. Furthermore, their expertise should also be leveraged through partnerships with the Government. **Strengthen the action and contribution of NCD civil society CSOs, which should be leveraged by the engagement of governments and partnership with CSOs.**
5. **Create partnership and collaboration with Overseas Development Assistance (ODAs) to complement domestic resources** and increase health expenditure for tackling the double burden of diseases, consistent with the County's priorities.
6. **Increase commitment for integration and decentralization of NCD services in the Primary Heath Care System.**
7. **Develop appropriate strategic health communication campaigns on NCD and conduct concrete and continuous awareness creation and massive community mobilization.**
8. Malnutrition and unhealthy diets are one of the leading risk factors for non-communicable diseases. **It is recommended to design and implement double and triple duty action interventions and programs** that can simultaneously address the risk and burden of both undernutrition and overweight, as well as obesity or diet-related NCDs.
9. **Strengthen the capacity of NCD human resource through the introduction of a Family Medicine curricula.** Moreover, it is important to implement different retention mechanisms of the trained staff.
10. **Ensure continuum of delivery of drugs and supplies for NCDs**, including maintenance of equipment.
11. **Look for innovative approaches that contextualize NCDs service delivery and identify the risk factors to design appropriate interventions.**
12. **Strengthen the capacity of the PHC system in providing the continuity of care needed by patients affected by chronic diseases.**

8. CLOSING SPEECH

8.1 Mrs. Laura Porcellato - AICS Addis Ababa Health Programme Officer on behalf of AICS Rome

Representatives from the Federal Ministry of Health and the Regional Health Bureaus, from Universities and Agencies;
International guests from Sudan, Palestine, and Italy
Fellow distinguished members from Development Partners, local and international CSOs,
Ladies and Gentlemen,

It is an honor for me to be here representing the Italian Agency for Development Cooperation – HQ Office on behalf of Mr. Gianturco Leone, Head of the Human Development Department who could not be here today due to some urgent matters.

On his behalf, I would like to thank all the speakers, panelists, participants and modulators for your valuable presence and active engagement. I hope we will all benefit from the discussions held at this workshop and that the outcome can contribute actively to the improvement of the Ethiopian Health System and to the attainment of the long-term objectives of the Country.
Following the 17 Sustainable Development Goals set by the 2030 Agenda, the Italian Agency for Development Cooperation is committed to improve the health status of the populations targeted by AICS funded programmes with a special attention to NCDs' fight.

Acknowledging that NCDs constitute one of the major challenges for sustainable development in the 21st century, and that addressing them is a priority for social development as well as for investment in people, 3 years ago AICS organized in Rome a seminar on "Strengthening the prevention of non-communicable diseases in low and middle-income countries", in order to discuss the NCDs strategic priorities in the health cooperation framework, which are going to lead the Italian interventions. For this reason NCDs are considered to be a priority in the Italian Strategic Cooperation Plan and Guidelines to be applied all over the world. Since then, the Italian Cooperation has moved forward and has implemented several programs for contrasting NCDs through preventive and curative interventions, in line with the "best buys" recommended by WHO, and aimed at accelerating progress toward universal health coverage (UHC).

Concerning the **primary prevention** like promotion of healthy lifestyle, we support several programs aimed at fighting **tobacco** consumption. In four African countries, we are promoting the increase of taxation, the implementation of "Smoke Free Environments" and the adoption of "Graphic Health Warnings". Ethiopia is benefitting from the Tobacco taxation and smoke free environment: recently the House of Parliament passed the excise tax proclamation, which will increase the tax share from 33% to 54%. This will indeed bring a consumption reduction by around 19% with a result of around

120,000 fewer smokers. This is really an admirable result! We have to thank the MoH commitment and WHO assistance in fighting for our health!

In accordance with the UN Decade of Action on Nutrition 2016-2025, AICS promotes initiatives aimed to contrasting **malnutrition** in all its forms (triple burden: micronutrient deficiency, obesity, and malnutrition by default).
(We have seen) in Palestine we are providing technical assistance for the definition of legislation and regulation regarding food safety and promotion of healthy lifestyle, with specific focus on the reduction of trans fatty acids, salt and sugar, and the implementation of tax on sugary beverages.
AICS is supporting the Ministry of Health in Bolivia with a prevention and control program for chronic diseases**,** which includes actions for diabetes prevention, and in Sudan, we are contributing to reduce the prevalence of diabetes, with innovative approach by leveraging mobile technology.

Regarding the **secondary prevention** initiatives, I will be mentioning some, like **Screening Activities** for early detection and early intervention in preventing morbidity and mortality due to NCDs.
We developed screening programs for breast, cervix and colon cancers in Palestine, Sudan, and Bolivia, by following a gender and the family medicine approach.
These initiatives are often implemented in collaboration with Italian Centres of Excellence, like the Istituto Oncologico of Florence and Campus Biomedico.

Until recently, **mental health** was not given sufficient attention in the public health agenda, with particular reference to low and middle-income countries, where improvement of mental health services rarely occurred. Consequently, mental health has been one of the most neglected of all health concerns. It is nowadays recognized that mental well-being is a fundamental component of health: good mental health enables people to realize their potential, cope with the normal stresses of life, work productively, and contribute to their communities. We are present in Jordan with a program aimed at strengthening the mental health services for Syrian refugees and vulnerable Jordanian population. In Palestine, Bethlehem hospital, we are supporting the de-institutionalization process for chronic patients through psycho-social rehabilitation initiatives, aimed to provide opportunities for employment and social integration. For both initiatives, we have an agreement with the Department of mental health of Trieste, which, again, represents an Italian excellence at national/international level.

Coming to Ethiopia, we have already listened and understood the double burden size and its importance, and I would once again emphasize the **economic burden** that is behind NCDs: when a person dies prematurely, the labour they would have produced in their remaining working years is lost, individuals with a disease are more likely to miss days of work or to work at reduced capacity. Thus, it is obvious that implementing interventions preventing such situations are cost-effective.

Another factor I would like to underline is the issue of **equity**: in the 2016 DHS (Demographic Health Survey) we read that current tobacco and khat users are from the poorer socioeconomic groups. The poor are more exposed to an unhealthy diet and unhealthy lifestyle, while they have limited access to public health education and health services. The conclusion is poverty is closely linked with NCDs and creates a vicious cycle whereby it exposes people to behavioural risk factors for NCDs and, in turn, the resulting NCDs become an important driver for families towards poverty. How can we reach

the UHC if we do not address the vulnerable and the socially disadvantaged people, who get sicker and die sooner than people of higher social status do? This will be some homework for all of us! And we believe that this workshop represented an opportunity for discussion and information exchange on a more sustainable and integrated services provision reducing the risk to further increase inequity in accessing health care services in Ethiopia.

Finally, I would like to express a special thank you to

- the MoH, especially H.E. Dr Lia Tadesse who opened the workshop and gave high visibility and attention to the current double burden affecting Ethiopians
- the DPCD (Disease Prevention and Control Department) which has led the workshop organization and had the capacity to gather such a group of excellent presenters and eminent professionals who have a complete overview of the double burden in the country, including the community's perspective.
- the international guests, Cristina Natoli and Dr Osama Elshafie, for sharing the Palestinian and Sudanese approach in tackling the NCDs-CDs burden
- AICS Jerusalem and Khartoum for being active in the promotion of the workshop and for involving the MoH of Palestine and Sudan to participate and present their experiences
- the panelists who this afternoon discussed broadly on the double burden issue and the Health system's preparedness to tackle them. Heartfelt thank you to Dr Yekoyesew Worku (the DG Operation) for his availability for the development partners and for his recommendations during the workshop preparation.
- I know this period is really tough due to HSTP II preparation, I hope the workshop brought innovative ideas and guidance in order to have the Ethiopian health system as "champion" in minimizing the burden as well as scaling up the interventions to reduce the levels of NCDs.

It is time to deliver NCDs services and to be united in the fight against the NCDs!

8.2 Dr. Yekoyesew Worku Belete - DG operation, MoH

Thank you so much Laura and Dr. Kunuz. To start with where Laura stops, I would like to thank everyone.

First of all, on behalf of the Ministry, I would like to thank the Italian Agency for Development Cooperation for creating this platform for all of us to come and discuss on our key priorities in our strategic plan.

I would like to thank, the team of Disease Prevention and Control Directorate, for co-hosting and creating this environment very conducive to say what we have and to listen what we do not have.
I would like to thank the civil society and all our other partners, who challenge us and who are willing to work with us in convincing the whole government to give attention to what mostly needed right now, and finally all the participants.

When I say MoH, I meant top to bottom. Without RHBs commitment and support, as I said, decision makers on their level, Regional and Woreda governments, we cannot talk enough of what has been done so far as a progress.

Having said that, the time we are having now is pulled apart in so many things. Prevention of COVID-19 is key priority by the Ministry right now and let me assure you these things. Correct information is what saves people. There are so many rumors; there is incorrect information, that has been transmitted and best assured the government is giving the highest priority and arguments, challenges and difference in approaches are always available and the right decision with the most beneficial one which can be changed in day time. There is no single moment that you assured. Everyday there is news, new looking strategies and there will be new decisions. So far, we are safe, we will remain committed to sever, and all of us are one family.

As closing remark, I was looking at the five objectives that the workshop has:

- Evidence: local and international experience on evidence generation and communication.
- It says meaningful interventions that fits to the context from Sudan and other African/ Middle East Asia Countries and from within.
- The third thing is to integrate services on screening and treatment in the primary health care approach.
- The fourth thing is capacity of our system.
- The fifth thing is collaboration among stakeholders.

I think this workshop has given the opportunity for all of us to think differently. I have to add two points.

1. Recommendation to the Ministry of health that the Ministry have led the right priority. Such forums give us an opportunity looking into our strategies and we are now writing our HSTP II, which will determine our strategy for the next five years. The health policy is already ready. So, I would like to invite everyone to look into that and challenges us more but be part of it for the solution.
2. The second one for partners, vertical programs have helped us a lot but for the future, it is very expensive for us to be judged as well as to be supported in the vertical bases. We have one health system (human resource, supply chain, information system, infrastructure, service delivery and community). So, let us integrate and one stop shop service. This what we should advocate for. Not easy but if we are committed, we can be efficient and effective.

RHBs, teaching institutions and health professionals, there is no other business focus right now than health. Health is politics by itself. It is the time for now really look into what we know better. I am social media free person. I announce this and I am not advocating for you to do but if you ask me why? Because the politics is on my table. Every day I am making a decision, signing paper that determines people's life. Therefore, that makes me a politician by its own continent and profession, and we can challenge all other politicians by bridging what we are most specialized at. It is focused and let us fight the fight that nobody else going to fight unless we do.

I hope and the whole Ministry's management and I committed with your support. We can take into the next level. Therefore, I really encourage us to be optimistic, positive, and off course, NCD prevention is what we are looking into. How much is eligible is going to NCD phase and how much is within the NCD, you can make the comparison. We have two things to do. We have to make a dam that can prevent the people to come to this end and a quality of healthy life for the people who are already with in it.

We all are now into this and all of us have a stake to play including myself as part of it. You are very much welcomed, and I would like to thank everyone.

9. ANNEXES

9.1 Workshop agenda

Day 1 – 26 February 2020			
Time	**Agenda**		**Moderator**
08:00 – 09:.00	Registration		
09:00 – 09:15	Departure to selected Health Centers	Group 1: Kazanchis HC Group 2: Yeka HC	
09:15 – 12:00	Health Centers' visit		
12:00 – 14:00	Lunch		
14:00 – 14:15	Opening Statement and Welcoming address	H.E. Dr. Lia Tadesse, Minister of Health	Mrs. Hiwot Solomon, DPCD Director
14:15 – 14:30	Keynote address	Mr. Tiberio Chiari, AICS Addis Ababa Former Director	
14:30 – 14:50	Ethiopian National NCD Strategy and NCD implementation in PHC	Dr. Mussie G/Micheal, DPCD, MOH	
14:50 – 15:10	EPHI, FMoH, and WHO, STEPS Survey on risk factors for NCDs and prevalence of selected NCD, Ethiopia, 2016		
15:10 – 15:30	The Ethiopia NCDI Commission Report, 2018	Dr. Alemayehu Bekele, AAU	
15:30 – 15:50	MoH, WHO and UNDP, The Case for Investment, including considerations on the impact of khat Report, 2019	Dr. Asmamaw Bezabeh, WHO Ethiopia	
15:50 – 16:20	Tea Break		
16:20 – 16:45	Discussion on the presentations	Participants	
16:45 – 17:00	Summary of day 1	Mrs. Hiwot Solomon, Director, DPCD, MOH	
Day 2 – 27 February 2020			
08:30 – 09:00	Registration		Dr. Kunuz Abdella, DPCD, MOH
09:00 – 09:20	Looking for long term impact: Linking NCD with stunting	Mr. Abenet Tekle, Food and Nutrition Society of Ethiopia	
09:20 – 09:40	Ethiopian community perception and reaction on NCD, Civil Society & Patients Point of View	Mr. Wondu Bekele, Mathiwos Wondu - YeEthiopia Cancer Society	
09:40 – 10:00	Presentation on Cervical cancer Screening and Treatment, Tigray Experience	Mr. Gerezgiher Buruh, Mekelle University	
10:00 – 10:20	Experiences of Doctors with Africa CUAMM on Cervical Cancer Screening and Treatment Projects in South Omo Zone	Mr. Ademe Tsegaye, CUAMM NGO	
10:20 – 11:00	Coffee Break		
11:00 – 11:30	Family medicine experience from Sudan	Dr. Osama Elshafie, Public Health Institute of Sudan	Dr. Kunuz Abdella, DPCD, MOH
11:30 – 12:00	NCDs in Palestine, AICS perspective	Mrs. Cristina Natoli, AICS Jerusalem Director	
12:00 – 12:30	Discussion on the presentations	Plenary	
12:30 – 14:00	Lunch		
14:00 – 16:00	Panel discussion on the prevention and management of NCD from different perspectives: 1. National context/policy direction/Health services 2. Public-private partnership (PPP) 3. Research institution/ CSO/ Academia 4. Finance/ Supply chain management	Panelists: • Dr. Yekoyesew Worku, DG operation, MoH • Prof. Kebede Oli, Cardiologist • Dr. Helen Yifter, Endocrinologist • Mr. Solomon Abdellah, PMED, MOH • Mr Andarge Abie, PCD, MOH • Dr. Awoke Misganew, EPHI	Dr. Kunuz Abdella
16:00 – 16:30	Tea Break		
16:30 – 17:00	Discussion and operational recommendations	Plenary discussion	
17:00 – 17:15	Closing remarks	Mrs. Laura Porcellato, AICS Addis Ababa Health Programme Officer	
17:15 – 17.30	Closing of the workshop	Dr. Yekoyesew Worku, DG operation, MoH	

9.2 List of participants

S/N	Guest of Honor	Organization	Position
1	Dr. Lia Tadesse	MOH, Ethiopia	Former State Minister, now Minister of Health
2	Tiberio Chiari	AICS, Addis Ababa Office	Director
S/N	**Participant's Name**	**Organization**	**Position**
1	Prof. Aldo Morrone	Istituto Dermatologico San Gallicano	Director
2	Dr. Aldo Venuti	Istituto Nazionale dei Tumori Regina Elena	Head of HPV unit
3	Meneber Belay	MOH	NCD officer
4	Dr. Sileshi Garoma	MOH	Advisor
5	Demeke Workneh	Yeka HC	Medical Director
6	Sara Kindaye	Kazanchis HC	Health officer
7	Saloa Usman	Kazanchis HC	Health officer
8	Shemsiya Teyb	Kazanchis HC	Health officer
9	Eskedar Alemaw	Kirkos Sub city	NCD focal person
10	Senait Beyene	MOH	Senior Advisor
11	Eskinder Eshetu	Kazanchis HC	Medical Director
12	Takelech Moges	MOH	NCD officer
13	Sintayehu Mesfine	MOH	NCD officer
14	Mahlet Belete	PSI	HHA project Specialist
15	Chiaria Biffi	CUAMM	CR
16	Laura Miguerina	CUAMM	PM
17	Meseret Yenehun	CCM/E Secretariat	Program Coordinator
18	Dr. Nacho Crisol	Meki Catholic Clinic/ Pablo Horstmann Fundation (Spain)	Medical Director
19	Selamawit Emishaw	Meki Catholic Clinic	C. Coordinator
20	Ouedraogo Fatimata		
21	Bota Enkias	CUAMM South Omo/Jinka Project	Program officer
22	Andulaem Assefa	CCM	CHA
23	Yonas Mindaye	Kazanchis HC	Health officer
24	Dr. Muse Tsegaye	Tigray RHB	NCD officer
25	S/r Nigist Biwota	Amhara RHB	NCD officer
26	Seida Mohammed	Afar RHB	NCD officer
27	Mohammed Abdulahi	Somali RHB	NCD focal person
28	Destaw Tadesse	Gambella RHB	NCD focal person
29	Tigist Tessema	SNNP RHB	NCD officer
30	Dr. Zerihun Gashaw	Harari RHB	D/Expert
31	Wondwosen Berhe	AA RHB	NCD case team leader
32	Col. Akalu Berhanu	EDA	Member
33	Dr. Redwan Ahmed	Haromaya University	CCD

34	Dr. Kibrom G/Slasie	Mekele University	Internal Medicine Department Head
35	Wondimu Zelalem	Jimma University	Internal Medicine Department
36	Dr. Yadeta Deshi	Haromaya University	CEO
37	Dr. Kassa Haile	AHRI	Researcher
38	Agazi Ameha	UNICEF	M&E Specialist
39	Dr. Girmachew Woldeyes	UNAIDS	
40	Mirchaye Mekoro	Health Poverty Action	Country Manager
41	Luwam Teshome	DFID	Health Advisor
42	Berheld Gahongayire	UNAIDS	Country Director
43	Mahbub Ali	UNFPA	Program assistant
44	Dr. Ermias Merkebu	AA University	Internist and PCCM
45	Dr. Tewdros Haile	Ethiopia Thoracic Society	Member
46	Prof. Tsinuel Girma	ENLN	ELP
47	Dr. Yoseph Mamo	Health Poverty Action	Consultant
48	Konjit Kassahun	Pathfinder International-Ethiopia	Project Manager
49	Saba Abraham	GSI Italia	Nurse
50	Carmen Bertolazzi	Istituto dermatologico San Gallicano	President
51	Dr. Zelalem Asefa	MAPPE	EC member
52	Prof. Tudith Ellis	THET	
53	Senny Malse	THET	
54	Giaua Narel	AICS	
55	Gioalehim Carable		
56	Mario Farjul	Spanish Cooperation	Program Manager
S/N	**Modulator's Name**	**Organization**	**Position**
1	Hiwot Solomon	MOH	Director, DPCD
2	Dr. Kunuz Abdella	MOH	Technical Assistant
S/N	**Presenter's Name**	**Organization**	**Position**
1	Dr. Mussie G/Micheal	MOH	NCD Expert
2	Dr. Alemayehu Bekele	AAU	Post Doc. Fellow
3	Dr. Asmamaw Bezabeh	WHO Ethiopia Office	NCD/NPO
4	Abinet Tekle	FONSE	PR/EC member
5	Wondu Bekele	Mathiwos Wondu YeEthiopia Cancer Society	Executive Director
6	Gerezghier Buruh	Mekele University	Assistant Professor
7	Ademe Tsegaye	CUAMM	Head of Program
8	Dr. Osama Elshafie	Dept. Family Medicine, Sudan	Head of Family Medicine
9	Cristina Natoli	AICS, Jerusalem	Representative
S/N	**Panelist's Name**	**Organization**	**Position**
1	Dr. Yekoyesew Worku	MOH	Director General
2	Prof. Kebede Oli	Land Mark Hospital	CEO
3	Dr. Awoke Misganaw	EPHI	Advisor/ Researcher

4	Solomon Abdella	MOH	Pharmaceutical and supply chain case team coordinator
5	Dr. Helen Yifter	Tikur Anbessa Hospital	Academic Director
6	Andarge Abie	MOH	HCF Advisor
S/N	**Organizer's Name**	**Organization**	**Position**
1	Laura Porcellato	AICS Addis Ababa Office	Health, Program Officer
2	Adele Manassero	AICS Addis Ababa Office	Communication Officer
3	Faben Getachew	AICS Addis Ababa Office	Gender and Nutrition, Program Officer
4	Million Admassie	AICS Addis Ababa Office	Health, M&E Consultant
5	Tibebe Akalu	AICS Addis Ababa Office	Health, HMIS Consultant
6	Gabriella Alloatti	AICS Addis Ababa Office	Office Manager
7	Lula Bogale	AICS Addis Ababa Office	Archive
8	Tariku Micheal	AICS Addis Ababa Office	Health, Finance Officer
9	Bethlehem Geremew	AICS Addis Ababa Office	Agriculture, Finance Officer
10	Yared Mengistu	AICS Addis Ababa Office	Driver
11	Sisay Beyene	AICS Addis Ababa Office	Driver

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