

**PROCEEDINGS OF THE SILVER JUBILEE
ANNIVERSARY AND THE 25TH ANNUAL CONFERENCE
OF THE ETHIOPIAN PUBLIC HEALTH
ASSOCIATION (EPHA)**

MAIN THEME

**PUBLIC HEALTH IN ETHIOPIA
PAST, PRESENT AND FUTURE**

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**MAY, 2014
ADDIS ABABA, ETHIOPIA**

PROCEEDINGS OF THE 25TH ANNIVERSARY CELEBRATIONS AND THE 25TH ANNUAL CONFERENCE OF THE ETHIOPIAN PUBLIC HEALTH ASSOCIATION

**February 20-22, 2014
Addis Ababa**

**Main Theme
Public Health in Ethiopia:
Past, Present and Future**

Sub-themes:

- **Drawing Lessons from the past: Addressing present and future priorities of PH in Ethiopia.**
- **Positioning PH as Central in Ethiopia's Development Agenda of post 2015.**
- **Meeting PH needs of 21st century: Drawing on Global PH.**

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ACRONYMS

AA	Addis Ababa
AAU	Addis Ababa University
ACD	Active Case Detection
ADEs	Adverse Drug Events
ADR	Adverse Drug Reactions
AFB	Acid Fast Bacilli
AFENET	The African Field Epidemiology Network
AFPHA	African Federalism of Public Health
AHRI	African Health and Research Institute
AIDS	Acquired Immunodeficiency Syndrome
AMC	Academic Medical Center
ANC	Ante Natal Clinic
AOR	Adjusted Odds Ratio
APOC	African Program for Onchocerciasis Control
ARI	Acute Respiratory Infection
ART	Anti-Retroviral Treatment
ATCA	African Tobacco Control Alliance
AU	African Union
B. Sc	Bachelor of Science
BCC	Behavior Change Communication
BEmONC	Basic Emergency Obstetric and Neonate Care
CBHI	Community Based Health Insurance
CCRDA	Consortium of Christian Relief and Development Associations
CDC	Center for Disease Control and Prevention
CDDs	Community Drug Distributors
CDs	Communicable Diseases
CHS	Community Health Service
CI	Confidence Interval
COHI	Community Health Insurance
CPHA	Canadian Public Health Association
CPR	Contraceptive Prevalence Rate
CRGE	The Climate Resilient Green Economy
CSA	Central Statistics Agency
CSA	Central Statistics Agency
DCH	Department of Community Health
DHS	Demographic and Health Survey
DNA	Deoxyribonucleic Acid
DOAJ	Directory of Open Access Journals
EB	Executive Board
EBF	Exclusive Breast Feeding
EFETP	Ethiopian Field Epidemiology Training Programme

EHNRI	Ethiopian Health and Nutrition Research Institute
EHNRI	Ethiopian Health & Nutrition Institute
EIA	Environmental Impact Assessment
EJHD	Ethiopian Journal of Health Development
EmOC	Emergency Obstetrics Case
ENA	Emergency Nutrition Assessment
EPACC	Ethiopian's Program of Adaptation to Climate Change
EPHA	Ethiopian Public Health Association
EPHLA	Ethiopian Public Health Laboratory Association
EPI	Expanded Program on Immunization
ETB	Ethiopian Birr
EU	European Union
FAME	Forum for African Medical Editors
FCTC	Framework Convention on Tobacco Control
FGD	Focus Group Discussion
FGM	Female Genital Mutilation
FMOFA	Federal Ministry of Foreign Affairs
FMoH	Federal Ministry of Health
FP	Family Planning
FSW	Female Sex Worker
GAP	Global AIDS Program
GAVI	Global Alliance Vaccination Initiative
GIS	Geographical Information system
GTP	Growth and Transformation Plan
H.E	His Excellency
HAPCO	HIV/AIDS Prevention and Control Office
HCWs	Health Care Workers
HEP	Health Extension Program
HEW	Health Extension Workers
HF	Health Facilities
HFA	Health for All
HGP	Human Genome Project
HHs	Households
HIV	Human Immunodeficiency Virus
HO	Health Officer
HSDP	Health Sector Development Program
HTC	HIV Testing and Counseling
ICCM	Integrated Community Case Management
IEC	Information Education Communication
ILC	International Legal Consortium
IMF	International Monetary Fund
IPCC	International Panel for climate Change
IRB	Institute Review Board
IT	Information Technology
ITN	Insecticide Treated Net
L10K	Last Ten Kilometers
LAM	lipoarabinomannan Antigen

LAPMs	Long Acting and Permanent Contraceptive Methods
LIS	Laboratory Information System
LLINs	Long-Lasting Insecticidal Nets
LMIC	Lower Middle Income Countries
LMIC	Low and Middle Income Countries
LSI	Leadership in Strategic Information
LSITP	Leadership in Strategic Information Training Programme
LTFU	Loss to Follow Up
MARPs	Most At Risk Populations
MCH	Mother and Child Health
MD	Medical Doctor
MDG	Millennium Development Goal
MDGs	Millennium Development Goals
MDR	Multiple Drug Resistance
MNCH	Maternal, Neonatal and Child Health
MOE	Ministry of Education
MOH	Ministry of Health
MPH	Master of Public Health
MSM	Men having Sex with Men
NAMA	Nationally Appropriate Mitigation Action
NCDs	Non-Communicable Diseases
NEPAD	New Economic Partnership for African Development
NRIH	National Research Institute of Health
NRU	Nutritional Rehabilitation Unit
OIs	Opportunist Infections
OPD	Out Patient Department
OR	Odds Ratio
PCD	Passive Case Detection
PDQ	Partnership Defined Quality
PH	Public Health
PHCU	Primary Health Care Unit
PhD	Doctor of Philosophy
PME	Planning, Monitoring and Evaluation
PMP	Performance Monitoring Plan
PNC	Post Natal Care
PNCLTFU	Lost to Follow up
PRCMM	Performance Review and Clinical Monitoring Meeting
QICs	Quality Improvement Committees
QoS	Quality of ICCM Service
RBM	Roll Back Malaria
RDT	Rapid Diagnostic Test
RH	Reproductive Health
RHB	Regional Health Bureau
RHS	Reproductive Health Services
RTAG	Research and Training Advisory Group
RTLm	Rapid Town Level Mapping
SARS	Sever Acute Respiratory Syndrome

SDG	Sustainable Development Goals
SHI	Social Health Insurance
SI	Strategic Information
SNNPRS	Southern Nations Nationalities People Regional State
SOPHA	Strengthening of Public Health Associations
SPH	School of Public Health
SPM	Strategic, Planning and Management
SRH	Sexual Reproductive Health
SS	Supportive Supervision
STI	Sexually Transmitted Infection
STIs	Sexually Transmitted Infections
SYGE	Save Your Generation Ethiopia
TB	Tuberculosis
TTBAs	Trained Traditional Birth Attendants
UN	United Nations
UNFCC	United Nation Forum for Climate Change
UNICEF	United Nations Children's Fund
USA	United States of America
USAID	United States Aid for International Development
USD	United States Dollar
UTI	Urinary Tract Infection
WB	World Bank
WFPHA	World Federation Public Health Association
WHO	World Health Organization
WTP	Willingness to Pay
YFS	Youth Friendly Services

I. EXECUTIVE SUMMARY

The Silver Jubilee Anniversary of the Ethiopian Public Health Association (EPHA) was colorfully observed in the new building of African Union in Addis Ababa from February 20 – 22, 2014. The 25th Anniversary was marked in concurrence with the annual Conference of EPHA. The twin occasions were organized by EPHA in collaboration with CDC, Packard Foundation, USAID, Ethiopians and Americans in Partnership to Fight HIV/AIDS, Pathfinder International, UNFPA, Health Policy Project, L10K, SYGE, and Ipas. One day ahead of the observance of the Silver Jubilee Anniversary and the conduct of the Annual Conference, a one-day pre-conference meeting of Chapters was held at the Dream liner Hotel. The main purpose of the meeting was to discuss draft Guidelines of Chapters and Members Registration procedures and to hear annual chapters' performance reports. The participants were EPHA Chapter members, Core Group members and Officials from the EPHA Head Office.

The participants were welcomed by W/ro Hiwot Mengistu, Board member of EPHA and the meeting was officially opened by Dr. Tewabach Bishaw, President of EPHA. She spoke of the importance of strengthening Chapters, and she said that the draft guidelines are intended to assist Chapters in their day-to-day activities. She pointed out that the draft documents were open for comments, revision, and modification.

Based on the day's schedule, the participants listened to and discussed the following presentations:

- "Introduction and briefing on current EPHA Activities" by Ato Ali Beyene, Members Affairs and Networking Director
- "Chapter Guidelines" by W/ro Elizabeth Demeke, Chapter Affairs Officer
- "Members Registration Guidelines" by Ato Yusuf Abdu, Member Affairs Officer
- "Introduction to the new web based members Data Base" by Ato Yosef Fikadu, IT Senior Officer
- "Resource Mobilization for EPHA House Complex" by Ato Biruk Zenebe, RM Officer.

The Sessions were moderated by Dr. Assefa Seme, Sister Workenesh Kereta and Ato Seifu Hagos, EPHA Board members.

The official opening ceremony of the grand event started after registration and distribution of relevant documents to the participants. High level Government Officials including Dr. Keseteberhan Admassu, Minister of FMOH, and other senior officials, members of the House of Peoples Representatives, heads and representative of partners, Non-Governmental Organizations, members of the Association and other invited guests to the 25th Silver Jubilee Anniversary and the Annual Conference of the Ethiopian Public Health Association were present to attend the grand event.

After welcoming the guest of honor and the participants on behalf of EPHA and the Organizing Committee, Master of Ceremony and Executive Board member of EPHA, asked the audience to stand up to observe a minute of silence in memory of the deceased professional colleagues and EPHA members, namely: Professor Chali Jira of Jimma University, Dr. Teshale Seboxa of Addis Ababa University and Sister Ejigayehu Dimamu of Hosanna Health Science College. The introduction of the three-day program was followed by music show performed by *Temesgen Children's* artistic group. The children entertained the participants with amusing traditional songs of different nation and nationalities of Ethiopia conveying health related messages befitting the occasion.

This was followed by a welcoming speech of Dr. Tewabech Bishaw, President of EPHA. After welcoming the guests, she spoke in detail about the main activities performed by EPHA during the past one year and the last 25 years.

Next to Dr. Tewabech's speech, keynote speeches were made by Mr. Jim Chauvin, President of WFPA, Professor Mengesha Admassu, President of Gondar University, Dr. Jeffrey Hanson, CDC Ethiopia Country Director, and W/ro. Yemeserach Belayneh, Country Adviser of the David and Lucile Packard Foundation.

Following this, Dr. Tewabech Bishaw invited H.E. Dr. Keseteberhan Admassu, Minister FMOH, to open the conference officially. His Excellency, the Minister of Health, after appreciating the achievements made by EPHA over the last 25 years, spoke at length on the efforts Ethiopia is exerting to ensure health delivery services throughout the country.

After the official opening ceremony of the conference, H.E. Dr. Keseteberhan handed over prizes to the winners of this year's EPHA awards. This year's winners were Professor Melkie Edris from the University of Gondar in recognition of his long years of service in PH; Dr. Almaz Abebe from EHNRI received the Senior Public Health Research Award and Dr. Eshetu Girma Kidane from Jimma University for Young PH Research Award. Institutional Awards were given to 7 institutions; namely: FMOH, CDC-Ethiopia, AAU, CPHA, David and Lucile Packard Foundation, WHO, and CCRDA. In connection with the Silver Jubilee Anniversary of EPHA, Special Awards of outstanding contributions were presented to 3 expatriates, 7 past and present EPHA Presidents, 6 Executive Board members, 8 Editors-in-chief and 43 Editorial Board members of EJHD.

Almost all of the entire morning session was devoted to the opening ceremony activities and as a result two panel discussions on two topics which were scheduled to take place after tea break could not materialize. But concurrent sessions and visits of poster presentations were held in the afternoon in keeping with the program.

The second and the third days were devoted to panel discussions, concurrent sessions, poster presentations and business meetings. Accordingly, the panel discussions entitled "Positioning PH as Central in Ethiopia's Development Agenda of post 2015" and "Meeting PH needs of 21st Century: Drawing Global PH" were addressed by different scholars and experts.

Numerous research works, which were conducted in different parts of the country, were presented by young and senior researchers during the concurrent sessions. All in all 289 papers were presented, out of which 149 were oral and the remaining 140 poster presentations. The topics covered were: HIV/TB, Outbreak, Nutrition, Maternal Health, Environmental Health, Mental Health and Non-Communicable Diseases, Child Health, Health Care Financing, Adolescent Health, Malaria, and Lab based studies.

In the afternoon of the third day, members met in a plenary session to discuss business matters of the Association. The Session was chaired by the General Assembly Executives and the agenda approved for discussion were:

- EPHA's Annual Activities report,
- EPHA's External Audit report,
- Election of new EPHA board members , and
- Any other business

Annual performance reports of EPHA and external audit reports were presented, discussed and endorsed by the General Assembly after a heated debate. Then, in a democratic and transparent election process, three EPHA members were elected to replace former board members who completed their tenure.

The formal closure of the plenary session was followed by a reception hosted by EPHA in honor of the participants during which Dr. Tewabech Bishaw, President of EPHA, invited:

- The three traditional prize winners to make short speeches expressing their feelings,
- Professor Damen Hailemariam to launch two books entitled, *Evolution of Human Resources for Health in Ethiopia* (1941 – 2010), and *History of EPHA* (1989-2014), and
- The winners of the oral and poster presentations to formally receive their awards.

The reception has provided an added opportunity to members, who came from different parts of the country to take part in the annual conference and to celebrate the Silver Jubilee Anniversary of their professional Association, to discuss past, present and future trends of their Association.

II. OFFICIAL OPENING CEREMONY

2.1. Program introduction



At the outset, Dr. Assefa Seme, Executive Board member and Master of Ceremony, on behalf of EPHA and the Organizing Committee welcomed the guest of honor, members of the House of Peoples Representatives, Government officials, heads and representative of partners, EPHA members and other invited guests to the 25th Silver Jubilee Anniversary and Annual Conference of the Ethiopian Public Health Association.

Before moving to the introduction of the program, he kindly requested the participants to stand up to observe a minute of silence in memory of the deceased professional colleagues and EPHA members, namely: Professor Chalie Jira of Jimma University, Dr. Teshale Seboxa of Addis Ababa University, Sr. Ejigayehu Dimamu of Hosanna Health Science College, and others whose name was not mentioned. This was followed by music show performed by *Temesgen Children's* artistic troupe. The children entertained the participants with amusing traditional songs conveying health related messages befitting the occasion.

In his introductory speech, Dr. Assefa said that the Ethiopian Public health Association was established in 1989 with the mission of promoting better health services to the public and maintaining professional standards through advocacy, active involvement and networking. Ever since its establishment, the Association has gone through remarkable changes over the past 25 years. The Association which was established by few dedicated public health advocates has now grown to such a big level and has currently more than 5000 members of various disciplines, educational background and professional categories.

The Master of Ceremony pointed out that EPHA continues to build itself as an entity of the public health organization and to become the catalyst for linking a multiple of disciplines in the public health spectrum. The foremost important area that EPHA is working for is building public health in the multidisciplinary nature and thereby encouraging various disciplines to work together to enhance the public health situation of the country. The Association continues to bring together various disciplines to deal with the current public health challenges and it encourages the culture of promoting participatory research.

Dr. Assefa pointed out that the Ethiopian Public Health Association is commemorating its 25th Silver Jubilee Anniversary at a time when Ethiopia is working hard to implement the country's Growth and Transformation Plan (GTP) and when we all are doing our level best to meet the Millennium Development Goals set for 2015. He said "I am sure you will all join me in appreciating EPHA's contribution towards the achievement of the major activities as one of the remarkable undertakings EPHA has contributed to the well being of the Ethiopian people."

Continuing his speech, Dr. Assefa said EPHA is commemorating its Silver Jubilee Anniversary under the theme: PUBLIC HEALTH IN ETHIOPIA: PAST, PRESENT and FUTURE. Under this theme three panel discussions, 286 scientific paper presentations (149 oral and 137 poster presentations) will be presented by expertise from across the globe during the three-day conference which is taking place at the spectacular African Union Assembly Hall.

Speaking about EPHA's awards, he said that this year there are traditional and special awards. Under the traditional award category, individuals and institutions that have made significant public health endeavors and achievements will be awarded in three groups-a senior Public Health Service award, a senior Public Health Research Award and Young Public Health Research Award and institutional Award.

In connection with its Silver Jubilee anniversary, EPHA will recognize individuals and institutions that have served EPHA over the past 25 years in different capacities. After concluding his opening remarks and introduction of the three-day activities, he invited Dr. Tewabech Bishaw, President of EPHA to deliver her welcoming address.



2.2. Welcoming address

Dr. Tewabech Bishaw, President of EPHA, after welcoming the guest of honor, Dr. Keseteberhan Admassu, Minister of Health and members of the House of Peoples Representatives, Representatives of higher institutions of learning, local and international Organizations, development partners, other invited guests and EPHA members, said "on behalf of the Ethiopian Public Health Association and on my own behalf it is my honor and privilege to welcome you all to this auspicious and memorable day when EPHA is commemorating its Silver Jubilee Anniversary. This is a joyous moment to all of us that we are able to witness this special day in the life of our Association."

After welcoming the invited guests and EPHA members, she spoke in great detail about EPHA's achievements made and challenges encountered during the year 2013. She noted that EPHA has continued to work closely with the FMOH, the RHBs, sub-regional organizations, institutions of research and high learning institutions, sister associations, national and international organizations in the public, private and NGO sectors and with its members to contribute its share in the nation's health development

and the achievement of its objectives. She also spoke with emphasis about the contributions of development partners such as CDC-Ethiopia, Lucile and Packard Foundation, the Canadian Public Health Association, World Health Organization and many other partners.

The long serving and outgoing President of EPHA further observed that “We find it befitting to underline Ethiopia’s one important step and achievement in public health by ratifying the WHO Framework Convention for Tobacco Control where EPHA has also played a key role.”

Dr. Tewabech noted that strengthening national, regional and global networking and Partnership has continued in the country and abroad. Speaking about EPHA members, she said that now it stands at 5050, showing an increase of 401 from last year. The number of regional chapters has likewise increased from 18 to 24 and the staff deployed in the Secretariat has increased from about 60 to about 80 during 2013. Effort to ensure the construction of EPHA’s own House is in full swing and resource mobilization for this purpose is progressing well. In this regard, she thanked Dr. Keseteberhan and his Ministry for the continued support they are providing to ensure the realization of the construction of the EPHA House. She said that EPHA Executive Board members and staff are making significant financial and other contributions to ensure the successful completion of the EPHA building.

She went on to say that “while acknowledging the valuable contributions of all our members to where EPHA is now, I feel honored to thank those visionary founding members (some of them regrettably not with us today) who saw the wisdom in creating such an important Association. Along the years, our Association with the support from its development partners in the country and abroad, to whom I am very thankful, has made significant contributions in the health sector.”

Dr. Tewabech also called on the new generation, young public health professionals in the country and abroad, to step-in with stride, vigor and commitment and build on what has been done so far and take EPHA to the next level for greater contribution and visibility. She also stressed that “We must all renew our commitment to work diligently towards EPHA’s mission and vision so that EPHA will remain relevant through the years and take bold steps to address the many challenges including, among others, increasing public awareness to protect their health from communicable and non-communicable diseases, strengthening EPHA’s capacity in training and research to enhance the capability of its members for evidence based advocacy, policy and strategy and in improving access to quality health services for all.

Towards the end of her speech, she noted, “I would like to say that I have been blessed, lucky and honored to be a part of the EPHA’s 25 years of journey and make my modest contribution.” She added: “I feel joy to be among those who founded the Association, and to have and to use the opportunities to serve EPHA in various capacities including: as a life member, as Editorial Board member of the Ethiopian Journal of Health Development, as a member of the Advisory Council, Chairperson of the EPHA House Resource Mobilization Committee and Chairperson of the EPHA Executive Board. Furthermore, I have been honored to represent EPHA and serve as the Secretary General of the African Federation of Public Health Association, and member of the Executive Committee and Governing Council of the World Federation of Public Health Associations. Most of all I am humbled and it gives me utmost gratification to be elected twice to serve our Association as its president, first in 1991-1992 and second from 2009-2013.” (See annex 1 for Dr. Tewabech’s full text speech).

2.3. Keynote address:

2.3.1. Mr. James Chauvin, President- WFPA



In his message read by Dr. Mengistu Asnake, Vice President/President Elect, WPFHA, Mr. James Chauvin said that the Ethiopian Public Health Association (EPHA) was celebrating its Silver Jubilee, marking 25 years of uninterrupted and remarkable service to the people of Ethiopia. Since its founding in 1989, the EPHA has played a leadership role as an ardent advocate for healthy public policies and the development and application of best practices to improve, promote and protect the health of all people in Ethiopia, regardless of their ethnicity or creed, where they live, or their life circumstance.

He further said, “It (EPHA) has been a trailblazer in many areas, including gender equity, reproductive health, maternal and child health, immunization and tobacco control.” The recent ratification by the Government of Ethiopia of the World Health Organization’s Framework Convention on Tobacco Control is a testament to the EPHA’s hard work and efforts to stop the toll on life of one of the world’s most terrible man-made causes of morbidity and mortality, he said, adding, the EPHA also led by example, being one of the first strong and sustainable African public health associations to ‘graduate’ from the Canadian Public Health Association’s Strengthening of Public Health Associations (SOPHA) Program.

(Full text of Mr. Chauvin is attached as Annex 2)

2.3.2. Professor Mengesha Admassu, President- University of Gondar



Addressing the participants, Professor Mengesha said, “Today is a very special day for everyone here especially for me. I feel I am very fortunate to be part of this exceptional occasion of 25th Silver Jubilee Anniversary of EPHA. What makes today very special is that it is the year we officially start celebrating our 60th anniversary, our Diamond Jubilee. Even though we all share similar feeling to this moment, it is a great pleasure for me to say happy 25th and 60th anniversary from the bottom of my heart to all.” He further stated, “As you may guess, the University of Gondar planned a year full of events of celebrations: Alumni

graduation, referral hospital inauguration and conference on the past, present and future of our university in between there would be also art entertainments.”

Professor Mengesha also spoke at length on the evolution of Gondar University, past experiences and practices of public health in Ethiopia, current experiences and practices of public health in Ethiopia and the way forward.

Finally, he concluded his speech by extending his heartfelt gratitude, on behalf of the University of Gondar and himself, to the 25th Silver Jubilee of EPHA working groups for their commitment, dedication and passion and creating an opportunity to bring participants together to celebrate the Anniversary and take part in the 25 annual conference of the Association.

(The full text of Professor Mengesha’s speech is attached as annex 3)

2.3.3. Dr. Jeffery Hanson, Country Director CDC-Ethiopia

The Country Director of CDC-Ethiopia said that it was a great pleasure and honor for him to be part of this event. He said, “On behalf of CDC and the USG, I congratulate the Ethiopian Public Health Association (EPHA) and its members for the Silver Jubilee Anniversary of the association.” The Ethiopian Public Health Association has been a valued CDC partner since 2003, implementing PEPFAR supported HIV/AIDS programs, he pointed out.



Dr. Jeffery also stated that the goal of CDC-EPHA partnership was to improve the effectiveness of comprehensive HIV/AIDS programs through the generation and dissemination of quality strategic information in Ethiopia. He added that EPHA has expertise in generating and disseminating strategic information for decision making and as these are core components of an effective HIV response, EPHA is contributing its utmost to improve public health practice and service delivery in the area of HIV/AIDS prevention and control in Ethiopia.

After providing detailed information of some of EPHA’s important contributions to PEPFAR supported programs, he said, “once again congratulations for your 25th Silver Jubilee Anniversary and I wish you all not only fruitful three days of meetings, but more many years of public health service to come.”*(Dr. Jeffery Hanson’s full text speech is attached as annex 4).*

2.3.4. W/ro Yemeserach Belayneh, Country Advisor- The David and Lucile Packard Foundation

W/ro.Yemeserach started her speech by expressing her heartfelt congratulations to the members, Secretariat and board of EPHA. She said, “In the same manner, I want to congratulate all of us-the public-who are both the beneficiaries and benefactors of improvements in public health in Ethiopia.”

She pointed out that twenty five years was a period of adolescence where a child grows, learns, and reaches adulthood to enjoy life and to contribute to the society. As a human development is a lifelong process of physical, behavioral, cognitive, and emotional change, so is organizational growth. During the last 25 years, EPHA has grown in its scope and reach. During this period, the issues in health and other social affairs have been going through a dynamic process of change and development in Ethiopia and around the world.



W/ro. Yemeserach further stated that public Health in the 21st century, where the whole world has become so interconnected and interdependent, is much different than twenty five years back when EPHA started its toddler jump. She added: “Today, everything that affects us-from global warming to the spread of disease, from migration to alcohol and substance abuse require a different set of skills and approach. During the last decades, the field of public health has grown from addressing mere absence of disease to incorporate a sense of wellbeing, enjoyment and fulfillment in all aspects of life.”

In conclusion she said, “...in the years to come, EPHA will have greater roles and responsibilities nationally and internationally to closely follow the debate, understand the context and help us to re-align our interventions.” On behalf of the Packard Foundation and herself, she expressed here sincere wish that EPHA will become one of the leading global institutions of the new era to deliver change, add impetus to what is already happening and realize the full potential of the association.

(The full text of her speech is attached as annex 5)

2.4. Official opening address, H.E. Dr. Keseteberhan Admassu, Minister, Federal Ministry of Health

The celebrations of the 25th Silver Jubilee Anniversary and the opening of the Annual Conference of EPHA was officially opened by Dr. Keseteberhan Admassu, Minister of the FMOH and Chief Patron for the EPHA House Construction.



Dr. Keseteberhan began his speech by saying, “It is a pleasure for me to deliver a congratulatory message on the historic occasion of the Ethiopian Public Health Association’s 25th Silver Jubilee Anniversary. Please allow me to congratulate the leadership, members and stakeholders of EPHA on their 25th Silver Jubilee Anniversary. I should say on our 25th Silver Jubilee Anniversary because I am also a member of EPHA.”

On behalf of the Government of Ethiopia and the Ministry of Health he assured the leadership and members of EPHA that “we will build on our existing strong partnership to improve the health and well being of our people by generating and implementing evidence-based health policies, strategies, programs and plans.” He went on to say, “Over the past years, EPHA convened well-attended annual conferences that have provided tremendous opportunities for stakeholders of the health sector with unique opportunities to explore scientific research, best practice and programmatic experiences regarding the public health development of Ethiopia.” The conferences, he said, have also provided platforms for participants to dialogue and debate on broad range of public health issues.

Dr. Keseteberhan further said as a learning organization he would like to encourage EPHA to continue to use the annual conferences to share best practices, new innovations and draw lessons relevant to the future. He added: “Moreover, true to the theme of this year’s annual conference, entitled: “Public Health in Ethiopia: Past, Present and Future”, I do implore you to critically assess your past contributions, draw lessons learned from your experiences and develop a road map for the future.”

Dr. Keseteberhan also dwelt at length on Ethiopia’s achievements in reducing transmission of HIV/AIDS, child mortality and construction and expansion of health facilities and training of health professionals.

(Full text of his speech is attached as annex 6)

2.5. EPHA Award Ceremony

Following the official opening of the Grand Event, the Master of Ceremony, Dr. Assefa said this year there will be two types of awards-traditional and special award. In the traditional EPHA Award, individuals and institutions that have shown magnificent public health endeavors and achievements will be awarded in three categories-senior Public Health Service Award, Senior Public Health Research Award and Young Public Health Research Award and Institutional Award.

He said in connection with the 25th Silver Jubilee anniversary, EPHA will also recognize individuals and institutions that have served EPHA in different capacities during the past 25 years

After providing information about the election process of the traditional awardees, Dr. Assefa requested Dr. Tewabech to invite Dr. Keseteberhan to hand over certificates to the awardees. Accordingly, the three winners of this year’s EPHA Traditional Award received their respective certificates from the Minister of the Federal Ministry of Health.

2.5.1. Senior Public Health Service Award: Professor Melkie Edris of Gondar University

The awardee started his career as a traditional weaver in a country side at the age of ten, and became a driver at the age of sixteen. Then he was employed as a driver by the then Gondar Public Health College and Training Center in 1961.

After three years of services, the college allowed him to join primary school during his spare time. He used to work at night and attend classes during the day. In doing so, he completed primary and secondary education in 1971. In 1971-2 he joined the college to take a health officer course and graduated in 1977 with a BSC degree in Public Health.

Soon after graduation he was assigned in one of the health centers under the Ministry of Health and served for one year. Then he was employed by the Ministry of State Farm and served for two and half years. In 1982 he returned to Gondar and employed by the Gondar College of Medial Sciences as an instructor with academic rank of graduate assistant. In 1991, he obtained an MSC degree in Applied Human Nutrition from

the University of Nairobi, Kenya. Since then he has been lecturing in nutrition to students of medicine, health officer, nursing, environmental health technicians, midwifery, postgraduate MPH and MSC students. He has also served the college as Vice Dean for about five years and acting Dean for six months. At present his academic rank is full professor. He has reached his present educational status and academic rank through hard ways. The National and Regional mass media considered his achievements to be good examples for many people who had no chance of attending classes during their childhood. He has authored and co-authored more than 25 scientific papers in peer reviewed journals.

2.5.2. Senior Public Health Research Award: Dr. Almaz Abebe of EHNRI

This awardee was born in Addis Ababa and had elementary and secondary schooling at Menilik II School. The awardee obtained a B. Sc. degree in Biology from the Addis Ababa University. After graduation, she joined the then National Research Institute of Health (NRIH), now the Ethiopian Public Health Institute (EPHI) as assistance researcher and served the institute for some time as a young researcher before she got a chance to continue her education at Karolinska Institute, University of Stockholm, Sweden, and graduated with M. Sc. degree, in Virology. For the 2nd time, she has got a chance from her Institute to continue her education with a higher level at Academic Medical Centre (AMC), University of Amsterdam, Holland where she obtained a PhD degree in Virology.

In addition to the basic academic educations, she took different short-term trainings during her long-term service. These accumulative academic leanings and long time management experiences helped her to take the different responsibilities and activities at different levels within the Institute and its prime partners. Currently, she is serving EPHI as a Senior Scientific Advisor position.

2.5.3. Young Public Health Research Award: Dr. Eshetu Girma Kidane

This awardee was born on September 11/1983 GC in Dire Dawa where he attended a primary and secondary school. In 2004, he joined Jimma University for higher education and completed a B. Sc. degree in Health Education and Health Promotion in 2007.

In the same year, he joined Jimma University, Department of Health Education and Behavioral Sciences as graduate Assistant. After one year of service, he joined MPH training in Health Education and Health Promotion and completed in 2009. From June 2009 to March 2012 he served as a Lecturer in the same department. As of March 2012 to date, he is serving as an Assistant Professor in the same department. Since September 2012, he is attending a PhD course in International Health and Medical Research in Center for International Health, Ludwig-Maximilians-Universität Munich, Germany.

He has published more than 20 manuscripts in local and international scientific peer reviewed journals. He has received best researcher of the year award during undergraduate research in 2007 in the Department of Health Education and Behavioral sciences, Faculty of Public Health; Jimma University. He has also been awarded the German Association for Psychiatry and Psychotherapy (DGPPN) and the German Alliance for mental Health, in association with the foundation for mental health and the anti-stigma association-open the doors award for De-stigmatizing mental disorders on the occasion of the 2012 DGPPN congress in Berlin, Germany.



2.5.4. Institutional Award

Under this category, seven organizations were presented with certificates in recognition of their magnificent public health contributions. Names of the award winning organizations are given below along with excerpts of their profile.

(The full version of their profiles are attached as annex 6)

2.5.4.1. The Federal Ministry of Health of Ethiopia

FMOH's partnership with EPHA created and enhanced the impact and effectiveness of action through combined and more efficient use of resources. The prominent affiliations are the following among others:

- FMOH is providing a paramount support to EPHA in Field Epidemiology and Leadership Strategic Information training for health professionals. (selecting candidates and secure jobs after return from training)
- FMOH has supported EPHA in project implementation on strengthening the health extension program mainly community based family planning.
- EPHA in collaboration with the FMOH has participated in the launch of the National Non Communicable Disease (NCD) master plan; establish a platform for knowledge sharing and documentation of best practices.

H.E Dr. Keseteberhan Admassu, Minister of FMOH, is pleased to serve as Chief Patron of EPHA House. The Minister is actively providing strategic guidance of resource mobilization for EPHA House. FMOH pledged 6 million birr for EPHA House construction to be disbursed in 3 years. 56 thousands kg iron bar of different thickness and diameter has been pledged.

Had it not been for the FMOH initiative and moral support to assist financially and in kind the EPHA House construction, mobilizing resources from other partners could have been very difficult and almost impossible.

2.5.4.2. US Centers for Disease Control and Prevention (CDC)

Through the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the CDC Office supports the implementation of an effective, efficient HIV program. This support contributes directly to saving the lives of men, women and children through high quality HIV treatment services and a comprehensive combination prevention strategy.

Through CDC support, EPHA has strengthened the institutional and leadership capacity of government institutions including the Ministry of Health, HIV/AIDS Prevention and Control Office, Ethiopian Health, Research and Nutrition Institute to respond to the HIV epidemic and meet MDG targeted health problems.



2.5.4.3. Addis Ababa University (School of Public Health and Collage of Health Science)

Addis Ababa University (through its School of Public Health at College of Health Sciences) is one of the key partners of EPHA and has been implementing different public health activities with EPHA for years.

The university had contributed a lot for the successful implementation of EPHA's missions and programs,. Had it not been in good partnership with the University, SPH and CHS programs would not have been realized.

2.5.4.4. The Canadian Public Health Association (CPHA)

The CPHA, through its program called "Strengthening of Public Health Associations (SOPHA)" has made significant contribution to the EPHA in terms of capacity building in its formative years through the provision of financial as well as technical supports.

EPHA was able to get direct support for projects including holding annual conferences, technical assistance to different project initiatives and supported its members in attending different international conferences. It was through this support that EPHA could establish and manage its Secretariat with a number of administrative and technical staff that totaled more than 40 at the end of the support period (2003).

More recently, the EPHA is also working with CPHA on a project that focuses on capacity strengthening within the Association for the implementation of the Framework Convention on Tobacco Control (FCTC).

2.5.4.5. The David and Lucile Packard Foundation

EPHA's partnership with the Foundation goes back to 2006. EPHA had four project activities with the foundation completed and has one ongoing project.

1. Repositioning RH/FP through strengthening HEP in Amhara
2. Strengthening the link between households and Primary Health Care Units (PHCU) for improving the delivery and quality of Reproductive Health (RH) and Family Planning (FP) services in Amhara region
3. Scaling up community based long-acting RH/FP service through the Health Extension Package (HEP) in SNNPRS
4. Expanding Long-Acting FP in Ethiopia, operating in Amhara, SNPR and Oromia regions.

The David and Lucile Packard Foundation is a private family foundation created in 1964 by David Packard (1912-1996), co-founder of the Hewlett-Packard Company and Lucile Salter Packard (1914-1987). The Foundation provides grants to nonprofit organizations at national and international level in the following broad program areas: conservation; population; science; children, families, and communities; arts; organizations effectiveness; and philanthropy.

2.5.4.6. World Health Organization (WHO)

EPHA has been working with WHO on various projects and public health priority issues. EPHA is working on a national nutrition program that provides capacity building training on a national level on therapeutic feeding program. WHO/AFRO was a significant financial support for the successful accomplishment of the 13th World Congress of Public Health organized by the EPHA

2.5.4.7. CCRDA

CCRDA is an indigenous non-profit umbrella organization which provides various forms of support to civil society organizations engaged in diversified development fields including: agricultural development and food security, rural and urban development, HIV/AIDS prevention and control, environmental protection and gender mainstreaming.

2.5.5. Special Awards

In connection with the Silver Jubilee Anniversary of EPHA, Certificates of outstanding contributions were presented to three expatriates, seven past and present EPHA presidents, 46 Executive Board members, 8 editors-in-chief and 43 Editorial Board members of the *Ethiopian Journal of Health Development*. Names of the prize winners are listed below. (*Only extracts of their profiles are presented and the full versions are attached as annex 7.*)

2.5.5.1. EXPATRIATES

2.5.5.1.1. Dr. Tadesse Wuhib

A native of Addis Ababa, Ethiopia, Dr. Wuhib, served as the first country director for the Global AIDS Program (GAP) in Ethiopia for six and half years.

Dr. Wuhib was recognized for his work with 29 medals, certificates, awards, plaques, etc. from CDC and Ethiopia. Today's EPHA-CDC strong collaboration and bondage was initiated when Dr. Wuhib was here in Ethiopia, as a country director for GAP.

2.5.5.1.2. Professor David Zakus

When he was in AAU he played an active role in the formation of a Professional Public Health Practitioners that has been transformed to EPHA in later stages. He was also one of the editorial team members of the first editions of the EJHD. Struggling to get financial resources to publish every edition was among the hard tasks Dr. Zakus and his team were facing. Worth mentioning here is that David Zakus was the one who linked EPHA with CPHA at first and facilitated to get seed fund for EPHA in difficult times when there was no financial base to sustain the organization.

2.5.5.1.3 Professor Ulrich Lasser

Professor Ulrich Lasser is recognized by EPHA at this 25th Silver Jubilee anniversary for his continued support and collaboration during the 13th World Congress on Public Health, which was jointly organized by the EPHA and the WFPHA. This has contributed to EPHA's visibility in the Region and the world wide as an important player in health development.

2.5.5.2. Past and present EPHA Presidents.

2.5.5.2.1. Ato Elias Gebre-Egziabher

He was the founder and the first president of EPHA (1989-91) and life member of EPHA. He has served as Executive committee member of the Eastern and Southern Africa Public Health Association, Member and

Executive Board Vice Chairperson of the Ethiopian Heart Association, member of the 1968 graduates Health Officers Alumni Association, and member of the Ethiopian Red Cross Society.

Ato Elias earned BSc in PH in 1968, Master of Public Health (major IEC/BCC, 1972); Post-Graduate Diploma in Project Planning and Appraisal, 1981; Post-Graduate Certificate in health sector reform - with emphasis on planning, financing, monitoring and evaluation in 1988.

2.5.5.2.2. Dr Tewabech Bishaw

Dr. Tewabech is the only EPHA president who served the association at different times. As the only woman President of the Ethiopian Public Health Association, she served from 1991 to 1992 and from 2009 to February 22, 2014. She is one of the founding members of EPHA.

Dr. Tewabech Bishaw is a Public Health Scientist with over 35 years of development work in 4 countries in Asia and Africa. Her special area of focus is on public health, human resources capacity building, equitable and people centered development with emphasis on Ethiopia and Africa. She is one of the first women public health officers in Ethiopia.

Furthermore, she is a founding member and serves as the Secretary General of the African Federation of Public Health Associations (since 2011). She also serves as the Executive Committee as well as Governing Council member of the World Federation of Public Health Associations (since 2010). Moreover, she is currently serving as member of the International Governing Board of AMREF, African Medical Research Foundation.

Dr. Tewabech Bishaw has worked for over 20 years with the United Nations Children's Fund UNICEF in senior Programme Management Technical Leadership positions in Botswana, Namibia, India, and Ethiopia. Before joining UNICEF she had worked for about 17 years in the Health Sector in Ethiopia, with the Ministry of Health at National, Regional and District levels.

2.5.5.2.3. Professor Dereje Kebede

Professor Dereje was deputy-editor and editor-in-chief of the Ethiopian Journal of Health Development (EJHD) for eight years. From 1989 to 1995, Professor Dereje served as Secretary of the research and publication committee, member of executive board and president of the Ethiopian Public Health Association (1992-1996).

He studied in Harvard University School of Public Health and received a Master's degree in epidemiology in 1987 and a doctor of Science degree in epidemiology in 1995. Currently he is working with UN agency in West Africa. He received his Doctor of Medicine from AAU in 1983. Professor Dereje has received various certificates of merit and grant awards.

2.5.5.2.4 Professor Yemane Berhane

Prof. Yemane has served as President of the EPHA from 1996 to 2000. Honors and awards he received include: Certificate of Appreciation for service rendered as President of the Ethiopian Public Health Association (2000) and other awards.

He has served as a physician, medical director, health manager, technical coordinator in different parts of the country. As an assistant professor, Prof Yemane served in the then DCH, AAU (1993-1997). Then, he was promoted to the rank of professor of public health in 1997 and served as Head in the same department from 1998 - 2001.

Yemane Berhane is a Professor of Epidemiology and Public Health. He got his Doctor of Medicine (1987) and Master of Public Health (1992) from the Addis Ababa University and his PhD from Umea University, Sweden (2000).

2.5.5.2.5 Dr Tesfaye Bulto

Dr. Tesfaye was president of Ethiopian Public Health Association between 2000 and 2002.

From 1968-1972, Dr Tesfaye served as Health Officer in Gidamie and Ejaji Health Center, Oromia. He also served as Integrating Health Officer in Wolega Regional Health department, Oromiya, Ethiopia. From 1979-1990 Dr Tesfaye worked as General Practitioner in Humera Hospital in Gondar Province, Medical Director of Jimma Hospital and Ras Desta Hospital. He also served as a Medical Officer as well as Epidemiologist of the National Research Institute of Health (NRIH).

Dr. Tesfaye has published 10 research papers as principal and co-investigator in national and international scientific journals. Presently, Dr Tesfaye working as Deputy Chief of Party to the USAID's Bilateral Essential Services for Health in Ethiopia, John Snow, Inc. Ethiopia since 2003. Dr Tesfaye Bulto received his BSc from the Gonder Public Health College in 1967 and his MD from Addis Ababa University in 1979. He also received his MPH from Tulane University, School of Public Health and Tropical Medicine, New Orleans, USA, in 1988

2.5.5.2.6 Professor Damen Hailemariam

Professor Damen has served as President of the Ethiopian Public Health Association between 2002 and 2006. Prof Damen's research activity has made valuable contribution in the development of public health in Ethiopia.

Professor Damen has led and participated in several research activities and authored and co-authored over 50 publications including chapters in over 10 books. Currently, Prof. Damen is working as a professor of Health Service management and policy analysis at the SPH, CHS, AAU.

Prof Damen Hailemariam graduated in 1987 as a medical doctor from AAU. In 1990, he received MPH from the DCH at AAU. In 1997, Professor Damen received his PhD in Health Services and Policy Analysis from University of California in Berkeley.

2.5.5.2.7 Dr. Mengstu Asnake

Dr Mengistu Asnake served as President of the Ethiopian Public Health Association (EPHA) from 2006 to 2009 and as an Executive Board member of the World Federation of Public Health Associations (WFPHA). During this period, he played a major role in lobbying and influencing for the 13th world Congress to be conducted in Addis Ababa, Ethiopia.

Dr. Mengistu Asnake is a public health specialist with 25 years of experience in reproductive health, primary health care, child survival, community health services, program management, training, operational research, and clinical service delivery. Dr. Mengistu is currently the Deputy Country Representative for Pathfinder International in Ethiopia. In addition, he is the Chief of Party for the Integrated Family Health Program (IFHP), a USAID flagship FP/MNCH program led by Pathfinder International in Ethiopia.

Dr. Mengistu is the vice president of the World Federation of Public Health Association (WFPHA) and will assume the presidency position in 2014. Dr. Mengstu Asnake received his MPH from Addis Ababa University (AAU), Faculty of Medicine in 1991, his MD from AAU, Gondar College of Medical Sciences in 1987 and several certificates from different in-country and abroad trainings. He is providing technical support in the area of RH/FP training and research to the Graduate Program of the Addis Ababa University at the School of Public Health and Institute of Population Studies as an Honorary Assistant Professor.

(Read annex 8 for more information about the past and present EPHA Presidents)

2.5.5.3 EPHA Executive Board Members

In connection with the Silver Jubilee Anniversary of EPHA, certificates of appreciation were also presented to 40 Executive Board members in recognition of the services they rendered to EPHA during the past 25 years. The Master of Ceremony said on the occasion that the contributions of the Executive Board members were key to the success of the Association. (*The names of the prize winning Board members is annexed to this proceeding-9*)

2.5.5.4 Editors-in-chief and Editorial Board members of *Ethiopian Journal of Health Development* (EJHD)

In its 25th Anniversary, EPHA has recognized the contributions of eight editors-in-chief and 43 Editorial Board members to the success of the Ethiopian Journal of Health Development

Thanks to the devotion and hard work of its editors-in-chief and editorial board members, the *Ethiopian Journal of Health Development* has become the leading public health journal in Ethiopia for more than two decades. The *Ethiopian Journal of Health Development* is a multi-disciplinary peer-reviewed publication concerned with all aspects of public health and medicine. It also encourages the contributors and editors of the Ethiopian Journal of Health Development to work much harder than before and in a coherent manner in order to maintain its position as a leading public health journal in Ethiopia. It is now the main source of scholarly public health information on Ethiopia. The Journal is currently indexed in the African Index Medicus and Index Copernicus (with an impact factor of 5.41). It is a member of the open access databases such as African Journal Online (AJOL) and Directory of Open Access Journals (DOAJ). The Journal is a founding member of the Forum for African Medical Editors (FAME). The Journal is published by the Department of Community Health, Faculty of Medicine, and Addis Ababa University and is the official organ of the Ethiopian Public Health Association. The EJHD got its prominent name by its hard working Editors-in-chief and its editorial board members, of course, without forgetting the contributions of all authors, reviewers and staff members. Thus, its strengths and/or weaknesses are the reflections of strengths and/or weaknesses of these members.

(*List of the Editors-in-chief and Editorial Board members is given in annex 10*)

III. PANEL DISCUSSIONS

As indicated earlier, the theme of this year's Annual Conference and the 25th Anniversary of EPHA was **"Public Health in Ethiopia: Past, Present, and the Future"**. Based on the theme, three panel discussion sessions focusing on current and future health issues were organized. Under three major topics, 13 presentations on 13 sub-topics by different scholars were scheduled to take place during the three-day conference. However, because of extended program during the opening ceremony, the first presentations supposed to take place during the first session were not conducted. Though discussions on these topics didn't take place, they are listed below for documentation purpose.

Day one: Thursday, February 20, 2014

Session I:

Major topic 1: "Drawing lessons from the past: addressing present and future priorities of public health in Ethiopia."

Moderator: Prof. Yemane Berhane, Managing Director, ACIPH

Sub-topic 1: 'Public health in Ethiopia: Drawing lessons from the past and looking forward', by Dr. Yayehyirad Kitaw, Independent Consultant;

Sub-topic 2: 'Public health work force in Ethiopia', challenges encountered and ways forward, by Dr. Tewabch Bishaw, EPHA President;

Sub-topic 3: 'Exercises in preparedness and management of epidemics', by Dr. Merawi Aragaw, Advisor of the Minister, FMOH, and

Sub-topic 4: 'Ethiopia's accomplishment in meeting Health MDGs', by Dr. Keseteberhan Admassu, Minister, FMOH.

As stated earlier, the first session could not take place because of stretched activities during the opening and prize awarding ceremonies. However, sessions two and three were conducted as scheduled and are presented and discussed as follows.

Day two: Friday, February 21, 2014

Session II:

Moderator: Ato Elias Gebre'egziabher

Major topic 2: "Positioning public health as central in Ethiopia's development agenda of post 2015"

Sub-topic 1: 'Public health as a central theme in multi-sectoral development-broader perspective' by Professor Helmut Kloss, University of California, SF

The moderator opened the session with a brief description of biography of the panelists

The main points discussed by the panelists, comments made and questions raised by the participants are presented as follows..

Professor Helmut Kloss, by way of introduction, explained that health was a development concern requiring a multi-sectoral input and increasing investments in health outcomes for the poor as advocated by macroeconomic studies of health. He described some of the relationships between public health and current accelerated multi-sectoral development in Ethiopia by focusing on Growth and Transformation Plan (GTP) in view of post 2015. He cited the seven strategies of GTP in Ethiopia as follows:

- Sustaining faster and equitable economic growth,
- Maintaining agriculture as a major source of economic growth,
- Creating favorable conditions for industry to play a key role in the economy,
- Massive investment in infrastructure,
- Enhancing expansion and quality of social development,
- Capacity building and deepening governance, and
- Promoting women and youth empowerment and equitable benefits.

The sector/indicators to measure the progress of the implementation of these strategies were also displayed in a table. Some of these sector indicators were mentioned as: total poverty count 55.6%, 29.2% and 22.2%; Developed irrigable land 1.0%, 2.5%, and 15.6%; Power Generation (megawatt) 318, 2000 and 8000; Rural potable water supply coverage 23%, 65.8% and 98% in 2000, 2009/10 and 2014/15 respectively.

In his conclusion, Professor H. Kloss emphasized the broad review of health aspects of current multi-sectoral development in Ethiopia. He indicated that the health and other sectors have benefited in many ways from collaboration and indirectly within the context of GTP/MDGs, and he argued for prioritization health as a central theme in the post-2015 development.

Finally, professor Kloss said that Health interventions must lobby development partners to allocate an increasing proportion of vertical funding to strengthen health system because a robust health system with qualified health workers and adequate medical equipment is necessary to reinforce the targeted interventions of vertical funds.

Sub-topic 2 "Financing public health Programs in Ethiopia", by Professor Damen Hailemairam, College of Health Sciences, AAU

The presenter pointed out that the bases for public role in health care need to rest on provision, financing and regulation. In relation to health care financing in Ethiopia, he explained that Ethiopia has adopted HCF strategies in 1998 and implemented in 2007 with different objectives such as ensuring equitable resources allocation and financial protection of its citizens, promoting sustainability of health financing by implementing the following strategies:

- Increasing funding for health by improving resource mobilization;
- Improving efficiency of resources utilization;
- Ensuring equitable resource allocation and financial protection of its citizens; and
- Promoting sustainability of health financing.

He pointed out that the government budget allocation on health was 9.1% and per capita public expenditure on health 16.1 USD. As to the source of financing, the greater share of 40% comes from International support, followed by 37%, 21% and 2% from households, the government, and insurance (mainly government) respectively.

Although there is a significant shift from the curative to preventive care, mostly, 42%, of the budget is consumed by the curative services while prevention of communicable diseases and MCH accounted for 2.5%.

The challenges cited in different areas include:

1. Challenges related to sustainability as health care delivery services are heavily donor dependent.
2. Challenges in CBHI such as design and implementation of Social and CBHI may require financial and technical support.
3. Challenges (waiver/exemption) such as concerns about inadequate funding to provide free waivers to all eligible beneficiaries.
4. Challenges to public-private partnership such as the private sector cannot be relied upon to provide adequate levels of merit good without close monitoring.
5. Challenges such as 80% of the total private health expenditure are out-of-pocket payment, revealing an inefficient, inequitable structure of private health expenditure.

Finally he said it was hoped that in-service will help to stabilize the government's health budget and make financing more efficient and equitable and establishing an "equity fund" to fund for fee waivers, mutual and indigenous in-voice, social fund for HIV/AIDS and third party and global externality.

Sub-topic 3 "Public Health Research: Informing Policies and Programs", by Dr. Abraham Assefa, AHRI

Dr. Abraham started his presentation by pointing out research as a central issue for any development. His discussion was supported by different figures from various researches. In comparison, for example, with China, (1081 per million), Ethiopia has extremely few researchers (21 per million population, 2007) and less funding (less than 0.2).

In relation to informing policies and programs, he emphasized that research should emanate from program need and should be quality responsive: policy makers should be open to listen to advice, mechanism of communication should be drawn to enhance active involvement of media to inform the public.

At the end of his presentation, he forwarded suggestions as to what needs to be done concerning GTP, MDGs and SDG (Sustainable Development Goals). He suggested the following as recommendations: Establish a system, prepare road-map, prioritize needs, build institutional capacity, create programs and data base of research, strengthen partnerships, mainstream research, fund research and improve dissemination and translation of researches into practice.

Sub-topic 4 “Building on lessons from MDG: Way forward to public health in Ethiopia”, by Dr. Peter Salama, UNICEF-Ethiopia Country Representative

Dr. Salama spoke of the progress made in Ethiopia in reducing under 5 deaths and said death rate has declined from around 400,000 per year in 1990 to 205,000 in 2012. He cited the progresses made in different areas as follows: maternal mortality ratio from 1067 (1990) to 676 (2010), skilled birth attendants from 4% (2000) to 10% (2010), CPR from 5% (1990) to 29% (2010), ANC from 27% (2000) to 34% (2010), and unmet need for FP from 46% (2000) to 29% (2010). Speaking about the child mortality rate in terms of region, he said the majority 50% is in Sub-Sahara Africa, followed by South Asia 32%.

According to the presenter, Ethiopia has made good progress on all MDGs except MDG 3 and 5. The achievement was attributed to the progress made in improved management of severe malnutrition, improved drinking water sources and sanitation facilities.

Regarding the challenges in Ethiopia, he indicated as equity, high neonatal deaths (44% of deaths in children under 5 years) and population growth. Reducing disparities, improving qualities and focusing on maternal, newborns and FP are the solutions to the existing challenges, he noted.

Dr. Peter Salama finally pointed out that Ethiopia is a model for reducing child death. The major contributing factors for such a result are scaling up of the treatment of SAM, improved water and sanitation, as well as roll out of HEP/ICCM.

Sub-topic 5: “Professional Health Associations as Stakeholders of Health Development”, by Dr. Mengistu Asnake, Country Representative, Pathfinder International, Chief of Parties

Dr. Mengistu started his presentations with a quotation by Dr. William B. Foege, recipient of the National Medal of Freedom, in USA’s highest civilian honor, “Our job in PH is to be indignant on behalf of everyone”. Continuing his presentations, he showed different logos of associations from different countries and explained that only the ice berg of the associations is known but much is expected from them. Taping the opportunities through strong collaboration is fundamental as they say, “in the middle of difficulty lie opportunity”.

Welcoming to the future by strong collaboration, health equity, decreasing the gap between ‘know and do’, decrease traffic accidents and strong membership.

Finally, he concluded his presentation by inviting all to attend the 14th World Congress on PH with the theme “Healthy People-Healthy Environment” which will be conducted from 11-15, February 2015, in Kalkata, India.

Comments and Questions on the five presentations

1. This morning there were rich presentations very important for PH. So the following comments refer to all the presenters.

Having been a virtual shaker in Ghana, Tanzania, Burma, Bangladesh, Uganda and of course here at home, I would like to shake again. That is, yesterday a few of us attended the outcome of the research in Hawassa the child labor problems and the facilities waste disposal out reach. Let PH association try more now to influence policy and performance. Now the new word for performance is ‘ትግበራ’ (*Action*-literal translation in Amharic).

2. As an outside looker of the Ethiopian health system, I am fascinated and very much pleased on the mortality reduction that has been presented by the UNICEF Representative. Since the data collection and analysis are not persistent in the different presentations, I would like you to say something about the challenges of quality and representativeness of data on mortality and other health indicators where UNICEF is well known about to deal with.
3. When it comes to maternal mortality which remained challenging in this country, I just would like to say the word abandoned HFA 2000 and got side tracked individual mortality and morbidity issues or the easy way out GOBBY and EPI. But, we failed for 50 years to strengthen basic services to ensure

competent health care at different levels of the health care system. In this country, about nine years ago there was an Essential Health Care package document that has been well researched, well written, well presented. I don't see it happening and let us see it again as a PH Association and Practitioners.

4. I would have appreciated it more if your comparison of research output was depicted in terms of domestic output. You heavily depended on the picture given from the international information; probably this information is based on those publications that are published in international renowned journals. But from our experiences, a lot of researches have been produced by so many researchers particularly young postgraduate students especially in PH areas. As we know the number of PH master students are increasing by the year and every student in his graduation generating at least one or two publications and on top of this also the number of higher training institutions be it government or private are increasing. When we look at these, is it really fair to say research works comparing Ethiopia with other countries is low?
5. In order to maximize the number of researches that need to be generated, what do you think should be done in terms of human and other resources? Don't you think it is better to create strong institution to coordinate, bring together these potentials and ensure country ownership?
6. It would be interesting to see the opportunities we have now in our country in terms of health research and PH research in particular. Now, we have over 30 public universities and over 70 higher education institutions both public and private. In these institutions we have health trainees and health trainers. We have other areas which can also affect health directly or indirectly like agriculture and others. We have not adequately utilized those resources, the human and the research capacity and we can tap those institutions. What should we as health researchers do to network the diversified education institutions we have in this country to address PH researches to reach in general in this country?
7. We have interesting initiatives in this country in addressing PH issues, connecting research institutions and many health related researches in our country and universities. One example is the operational research agenda which is done by the Research Advisory Committee, which connects three regional health bureaus, research institutions and universities. Can we duplicate this kind of initiatives in our health agenda nationally? We can capitalize on those kinds of initiatives and there are also interesting initiatives by universities in pinpointing what the health challenges of the community around our universities are. Professors and researchers from the universities need to go out to the communities, discuss with the HEWs, district health offices, regional and zonal officials, asking the farmers and trying to collect those information together, putting them as an agenda into thematic areas and then try to address those issues by research. Those kinds of issues can be diffused to the other sectors of our country and address research in a better way.

Responses

Before giving chance for the presenters to respond, the moderator assured the audience that the comments that were made are well taken and the translation of evidence into policies and practice are the very core, basic duties and responsibilities of professional associations. EPHA will take up this as a point for its resolution during its concluding business meeting.

Regarding the research related questions and comments, Dr. Abraham has responded in great detail as follows. Among the research outputs in the country, the numbers that are mentioned here in both reports in the paper published and African NEPAD studies do not look complete and have addressed for example survey and actual numbers of research output that are around.

The message is whatever we say about researches done around, they are put on shelves or published. When we compare ourselves with other countries, we are still far behind. We should not believe that we are doing quite a large amount of researches and that we are on the right track today. Nobody can deny this.

Are we trying to accelerate? Yes, 31 universities, after 5 years we may be very far in terms of research output. Is the quality of the research good? Are we producing useable data? Just information may not be enough; we may be just circulating the same information. As we do research, repeating the same and conforming in different areas have to be thought about. There are a lot of research outputs, probably may not be counted in this report. But this is not enough for our country. We are still very far behind.

Do researches be regulated through a national system with an owner to facilitate and coordinate? In the HSDP IV report, one of the identified problems we have in research in Ethiopia is defragmentation. It is done by different groups for different purposes but the information is not consolidated for action. That is important; the target set is how much of the researches would be aligned with the national priority setting? But quality and volume of researches should be adequate. Centralization of researches, yes we should have a national council guide and in general terms which way the nation should follow in terms of health research. What priorities there are but institutions, research facilities should be free to have their own strategies within the larger one. I don't think it is appropriate to have a regulatory unit deciding what topic, what research to be done, what discipline an institution or university should follow for that would not be useful at all in the national scale. That contradiction is not to mean setting fixed boxes for research.

Are we using the opportunities we have? We are creating the track. An example is the TB research meeting every year. The MOH research week is one area, where all other diseases are probably given forum to link findings into policies and deciding on what actions to take. Are our universities building on such directions? Yes, Mekele, Gondar, Jimma, Araba Minch, Haramaya, and other places, every where there is a new spirit of engagement of the young and we will soon have a flood of young researchers to deal with. We should give them the hope; give them center of excellence and models in developing good data and prosperous 2015 Ethiopia. I am not in any way desperate the research being done so far. What I am trying to say is we may be looking good but still we are very, very far and the world still racing on and we need to catch up particularly with research.

Finally the moderator thanked all the presenters and the audiences for the wonderful discussions and declared the session closed.

Day three: Saturday, February 22, 2014

Session III:

Moderator: Dr. Damtew W/Mariam of Japiego

Major topic: "Meeting PH Needs of 21st Century: Drawing on Global PH". The moderator started by giving a short biography of the panelists.

Sub-topic: "Emerging PH Concerns and Opportunity: Urbanization, Climate Change and NCDs" by Dr. Abera Kume, College of Health Sciences, AAU

The main points explained by the panelists, comments made and questions raised by the participants are presented as follows.

After thanking the moderator and the audience, Dr. Abera said that the purpose of his presentation was to show the link between climate changes, urbanization with non-communicable diseases; to demonstrate the assumptions and underlying factors to climate change and urbanization; and to describe the Emerging PH concerns and Opportunities. He showed the list of his references for his presentations: IPCC reports, UNFCCC, Pub Med: Reviews, journal articles, Google Scholar, WHO web sites, GEO Health report, and National and International documents on Climate change.

He started his explanation by showing the interaction of environment and development whether they are friendly or not. He said both at national and global levels there are always mediators in terms of institutions, organizations or in terms of public involvement. Many times these integrating institutions or services are not adequate and at the end there will be some kind of insults or social evils which we need to understand in terms of the interaction of environment and development. Development is civilization and urbanization is development but it has to be very much restricted and very much be friendly. To tackle the social evils/insults, public health actions such as policy and regulation, enforcement, partnership, capacity building and research are emphasized by the presenter.

The basic and challenging questions he put for discussion were: what is the contribution of climate change on NCDs? What is the contribution of urbanization on NCDs? What are the path ways? And what is the degree of increase?

- **Mediated Impact:** Malnutrition, famine, conflict, economic loss, migration...

Dr. Abera explained his concern of climate changes on Mental Health by showing the Path ways. The climate change related disaster, flood, drought, heat stress, loss of land, loss of livelihoods, poverty, isolation, alienation, grief, bereavement, displacement leads to MENTAL HEALTH: Acute/chronic, High/low prevalence.

In relation to urbanization, it was noted that Africa and Asia have rapid rate of urbanization (2007-2030).

The opportunities of urbanization and climate change include:

- Globalization
- It is a global concern (MDG No. 7)
- Global plat forms: UNFCCC, IPCC, International Conferences, Conventions, Agreements, MDGs
- Recognizing the global threats/hazard [conventions]
- Countries willingness to work together
- Use of carbon fund for afforestation.

What is being done in Ethiopia? Opportunities: He showed the changes in the environment: Case of Humbo and Soddo community-based Natural Regeneration Project Ethiopia using Carbon Fund. He compared the outcomes of the reforestation in 2006 with that of Dec.2011 with clear pictures..

Policies, strategies and programs

- Policies:
 - Ethiopian Constitution (1993)
 - The Environmental Policy of Ethiopia (1997)
 - Conservation strategy of Ethiopia (EPA-CSE 1997)
 - EIA proclamation No. 299/2002
 - Environmental Pollution Control Proclamation No 300/2002
- Institutional policies: main steaming the protection of our environment
- Ethiopia's Program of Adaptation to Climate Change (EPACC 2007)
- Nationally Appropriate Mitigation Action (NAMA 2010)
- The Climate-Resilient Green Economy (CRGE)

Finally, Dr. Abera summarized the effect of climate change and urbanization as follows:

- Greater impact on NCDs
 - Spatial: speed up Epidemiology transition
 - Temporal trend: increasing concern
- Exacerbates NCDs: frequency of illness, sudden deaths
- Cross-sectoral: Social, Agriculture, economical impacts
- Global concern

Comments, Questions and Response

1. I have been in Ethiopia for about 2 months and have seen the summer session in the town. Ethiopia has too much natural resources like sunshine. Is there any means of utilizing the solar energy?
2. In your presentation, I realized that a sort of deemphasizing on communicable diseases. I think we still deal with CDs while appreciating the increasing trend of NCDs. Even with climate change, CDs could still be problems. What is your view on that?

Responses

1. Dr. Abera responded by giving information about the different energy sources in the country which are documented in the national documents-the Climate Resilience and Green Economy, and Growth and Transformation Plan. These documents underline the options of renewable energy. An energy that has very little in terms of converting our environment. This is prioritized in terms of the use of hydropower in the range of 2000 MB and the probability is using hydropower development of 10000 MB and that is number one. The second one is developing wind energy. The wind energy has its own geographical distribution around such as Nazareth and Dire Dawa. The third energy is geothermal in Wanje, which is so much and is going to be developed.
In the case of solar energy, it is very cheap but it requires a kind of technology. This technology has to be transferred from European countries. That may take sometimes otherwise there is strong desire in terms of solar energy.
2. He explained that the focus of his presentation was on the link between climate changes and health. He reiterated that he didn't want to undermine CDs. They are important in terms of climate changes. Because of the pollution, climate changes and urbanization, water sources could be polluted. The intent of the presentation was to see the gradient of NCDs and CDs. But it is going to be narrower in the future including Ethiopia. CDs are causes of morbidity and mortality and are indeed of serious concern.

Sub-topic 2: 'Social Determinants of Health: A Progressive and Sustainable Health Development', by Dr. Professor David Zakus, University of Alberta, Canada

Dr. Prof. Zakus, after thanking EPHA for inviting him, informed the audience about his long history in Ethiopia and his relations with EPHA going back to 1990. He started his discussion by mentioning the two types of diseases as communicable/infectious and non-communicable. He asked the audience whether they know that 35,000,000 died from chronic diseases in 2010 and 60% of all deaths were due to chronic diseases. In this age of degenerative and man-made diseases; life expectancy exceeds 50 years, fertility, food production and public health are crucial factors in population growth, and changes in morbidity patterns, replacement of diseases are being observed, he noted. Chronic diseases (cardiovascular disease; mainly heart disease and stroke, cancers, chronic respiratory diseases, diabetes) constituted 50% of the total deaths in 2005. He outlined the causes of chronic diseases as:

- Underlying socioeconomic, cultural, political and environmental determinants:
 - Globalization, Urbanization, Population ageing
- Common modifiable risk factors: unhealthy diet, physical inactivity and tobacco use
- Non-modifiable risk factors: age, heredity;
- Intermediate risk factors: raised blood pressure and blood glucose, abnormal blood lipids, overweight/obesity;
- Main chronic diseases: heart diseases, stroke, cancer, chronic respiratory diseases, diabetes.

In addition, he described the main health related problems as follows:

Malaria: estimated number of deaths due to malaria worldwide is over one million per year, though dropping and 90% of these occur in Africa.

HIV Global Epidemic:

- Estimated 33 million people living with HIV: 31 million adults (17 million women), 2.3 million children,
- 4.5 million adults newly infected with HIV: 3.8 million adults, 0.53 million children;
- 3 million AIDS deaths: 1.7 million adults, 0.38 million children.

Tuberculosis:

- 8 million people become sick with TB every year,
- About 2 million people die.

Obesity risks are increasing.

Smoking:

- Smoking related deaths are dramatically increasing,
- About 6 million people die worldwide from smoking each year-about half in developing countries and half in developed countries
- Smoking is the leading cause of preventable illness, disability and death in Canada

Ethiopia-Canada MNCH Project 2013-2018.

- FMOH and St. Paul's Hospital Millennium Medical College and others/EPHA
- Protecting the Health of Pregnant and Delivering Mothers and Newborns in Ethiopia: A Systems Approach to Strengthening Skilled Birth Attendance and Referral.

Maternal Mortality: Key facts:

- Every day, approximately 800 women die from preventable causes related to pregnancy and childbirth;
- 99% of all maternal deaths occur in developing countries;
- Maternal mortality is very high in Ethiopia
- About 25,000 women die every year, why?

Determinants of health:

Income and social status, Social support networks; relations, Education and literacy, Employment/working conditions, Poverty, Physical environments, Geography, Human Rights, Lifestyle, Personal health practices; coping skills, Healthy child development, Biology; Genetics, Health services, Social security, Gender; Male dominance, Culture, Politics; Rule of Law, International Assistance.

Social Determinants of Health:

- Impact of society and individuals on chronic, non-communicable diseases, including mental health,
- Impact of society and individuals on infectious agents, and
- Impact of society and individuals on the planet: Planetary Health.
- Equity: Social Justice and Equity, Respect for Human Rights, Empowerment of Women, Poverty.

What influences health?

- 10% physical environment
- 20% clinical care
- 30% health behaviors
- 40% socioeconomic factors

Professor D. Zakus concluded his presentation by thanking for the invitation, listening and for thinking about these issues that can have profound impact on Public Health in Ethiopia.

Comments, Questions and Responses

1. You have talked about social determinants in health. Would you like to shed light and share on the way forward by way of suggesting what actions to take to address these issues at both national and regional levels?

Responses

Dr. Professor Zakus commented on the following four areas:

- The experience in Canada, at the ministry level in the government, there is inter-ministerial committee whereby Ministry of Agriculture, Ministry of Water and Sanitation, Ministry of Health, Ministry of Housing will come together regularly to discuss. The government started just two years back to have such ministerial discussions.
- Among the professional associations, numerous discussions are conducted. Medical association, public health association and other disciplines in medicine, educational professions, and other professional associations get together to discuss and decide what actions to take on issues that need to be addressed. For example, the medical associations review the social determinants of health. They have a concern on the health of the people and welfare and they have to address these issues.
- Being a multi-disciplinary association, there need to have an integration of all disciplines and professions. EPHA should take the leadership role in bringing all other associations together.
- Due to the global epidemic 10 years ago, the Canadian government established Canada-CDC institution, after the recommendation of a commission. So why not Ethiopia-CDC? It has a lot of advantages in getting information from pit falls the health point of view.

Sub-topic 3: “Global and Regional Partnership for Sustained Health Development and Equity”, by H.E. Dr. Mustapha Sidiki Kaloko, AU commissioner for Social Affairs

His Excellency Dr. Mustapha Sidiki Kalokohad critically analyzed and explained the conditions of partnership from the global and regional perspectives. He stated that global and regional organizations like AU and EU work in partnership. Most sustainable development in health can be enhanced through the utilization of global and regional partnership. It requires a complete investment on time, resources, commitment and sometimes a number of pit falls. Partnership improves the potential and enhances facilitation.

Continuing his explanation, H.E. Dr. Kaloko defined partnership as: “It is a relationship between two entities or organizations that is characterized by mutual cooperation and responsibilities to the achievement of specific goal or goals”. “Of course, it should be with mutual understanding and respect the other side of the partnership”, he added.

Partnerships are being used as successful models in many disciplines and integration develops from it. The AU plays on partnership, he said, adding: there are African partnership, European partnership, AU-Chinese partnership, AU-Turkey partnership, AU-South America partnership. Most of the organizations in health who may emphasize on public-private partnership have a lot of potentials and this partnership should not be overlooked.

The AU Commissioner for Social Affairs spoke at length by giving examples from AU point of view. First: there are partnerships in achieving economics of scale and initiative requiring investing high capital. And small countries/poor countries are in difficulties in using these capitals, only they succeed by partnership and AU encourage best practices. Second: benefits from positive externalities in the partnership environment. It is well known that a lot of countries invest in health by linking countries with organizations. It has a political pressure to invest more. An example he cited was African Leaders Malaria Alliance which is an advocacy group from high level. The political issues, one of the problems we face in the AU, are the legal issues. There are challenges related to securing investment in health because democracy is shallow, there are problems concerning parties and policies and due to priority issues as well as budget allocation,

and the external challenges. Let us mitigate these challenges. Public-private partnerships are more sustainable. Partnership needs individual effort. The transaction cost in development partnership is excessively high and it is essential to decrease the cost.

He forwarded some recommendations as follows:

1. Success of partnership will depend to a great extent on ownership of the process and outputs. Ownership of the projects, ownership is the only way for sustainability and the only way of development in the future.
2. Coordinating, taking responsibilities, power sharing, participation and cooperation of the various entities that are taking in partnership.

He also mentioned what AU is doing in relation to partnership in health;

- Coordinating them, which is the problem;
- Forming platforms of Heads of States like Ministers of Health, for 1-2 years service and would assemble in Geneva;
- There is great policy on partnership to guide member states; and
- Develop a Task Force, e.g. Food and Nutrition development, which stimulates plans of actions to guide member states.

H.E Dr. Mustapha Sidiki Kaloko concluded his speech by emphasizing what Global Fund is doing in different African countries - there is a paradigm shift in the AU.

Comments, Questions and Responses

1. We have to make distinction between African, Global, International, Trans-agencies partnership. And also there have to be intra and inter African partnerships. I know that AU is financially constrained as was the OAU. AU should attempt to have Africans' specific goals rather than like every individual country trying to respond to the global goals. HFA, MDGs, Water and Sanitation decade, all of these, make Africans reactive rather than reflective in its hopes and environmental needs. I am hoping and suggesting at least now after 50years anniversary, that the AU should try to show us more inter countries partnership based on experiences and practices.

How many African countries know what has been done in Ethiopia? They need to know about mortality reduction, its potential, MDGs achievements and so on. I don't know to the extent to which the Ethiopians are better examples and being shared among African countries?

Lastly, I think war and conflicts are health issues. There are many African children, women, persons who are dying prematurely, who are injured permanently just because of inter and intra African conflicts. So I think the peace building and maintenance and conflict prevention objectives of the AU should also emphasize the health impacts of conflicts and wars on our continent.

2. You have raised a very important and pertinent issue of partnership. Recently, the African Heads of States rectified a setup of AU-ACD that is a good way of creating partnership of members of African countries. How do you see this partnership? Could it be implemented? Many people are suggesting it cannot be practical. But when we talk of sustainable health development through partnership, this is a very good area, would you comment on that?
3. In your presentation it was cited that some African countries are contributing to the Global Fund. Do you think that we shouldn't have our African Fund rather than the Global Fund? If you create African Fund, we can prioritize our issues and should strengthen partnership among ourselves. We would strengthen inter and intra African partnership than contributing to the Global Fund. Africa should address its own agenda. Even though the money is very small, we may not raise a billion, but can own at least some. I would like you to comment on this.
4. Health is a governance issue and we will agree that Africa should own its development. The issue is we have many agencies specializing in different development sectors. Most of whom are members of the UN families and we know, as you mentioned it in your speech, these have their own interests while at

the same time the UN tries to bring all African states together in their partnership. The issue is how the AU is managing this relationship at global, continental and country levels.

5. In terms of resources for health, we know about the Abuja Declaration, there was an agreement that national governments to allocate 15% of their national budget to the health sector. But we are not observing any progress on this line. I would like to hear your reflections on this direction that national governments to commit more resources for health.
6. Regarding its human resources, Africa is losing to brain drain with globalization when people's movement is increasing and specially professionals are moving out of their country of origin to live and serve in other countries especially in developed countries. I feel like there is a strong loss of resources of Africa especially professionals who are key players in the area of health. I think Africa should raise this as a major continental issue and negotiate with governments at the highest level whereby professionals who leave the country of their origin for one reason or another would be provided with policy and resource support to bring them back to the continent. I know there is an office or department that deals with this. What is the management decision to save Africa's professional resources?
7. Some 33 African countries have agreed and established African Federation of Public Health Association (AFPHA) in Cote D'Ivoire in 2011. How could we strengthen this Association/Federation? Because each country was having the expectation that the Federation will be strengthened somehow and also with the partnership of AU and bring national associations and African professionals together to serve as a platform for those professionals in Africa to contribute towards addressing African health issues and beyond Africa. I would like you to comment on how the Association should be strengthened and the type of partnership towards contributing to address the African health issues by mobilizing health professionals in Africa?

Responses

H.E Dr. Mustapha Sidiki Kaloko has responded to the comments and questions raised as follows:

- Inter- Africa and intra-African partnership is a security issue and Government Issue. We have a number of bodies in the AU that address such issues. But in particular, I will take inter and intra African example and that a lot of emphasis is being done on the South – South Cooperation. I am not talking about China-Africa, India-Africa partnership, but I am talking about cooperation between Botswana and South Africa, Ethiopia and Sudan, Uganda and Kenya. One of the main problems in trying to deal with AU member states is that they are in such influence and diversified levels of development and not only that even if you think of one program, the way it is addressed to various member states is so difficult. But again, it is a belief of compromise in that diversity to share the best practices to other member countries. We have very interesting model countries like Rwanda, Ethiopia, Angola, countries that have quite a lot of issues that we can use to influence their countries. Like in Ethiopia, we have a score card. It is an initiative of scoring the achievements of various aspects of health issues which we keep telling other people. So we are not entirely ignorant of South-South Cooperation, Inter Africa and Intra Africa issues, we are working on this.
- As to AU-CDC establishment, there is doubt in the implementation. The AU-CDC finally prepared laws at the end of January of this year. We are in the planning stage and going to sit with the Ethiopian MOH to try to work out the modalities. I suppose it is at this stage and anybody who has any idea can go and introduce the idea. You cannot deny the significance of CDC. You know the job of an American CDC in Atlanta. We have no data/information during the epidemic of Bird Flu but we got it from CDC. So it is very important to have an African CDC.
- Should Africa have its own fund rather than contributing to the Global fund? There are so many funds that you will be surprised in Africa that may be one of the problems. We are spreading ourselves. Why not we concentrate on one that we can do? In fact, Global fund is an African initiative. It doesn't matter

how small the contribution, it will improve eventually. The idea of Global fund is very good but you have to look at the AU system. AU fund is going to be addressed. We are not very good in telling about ourselves. Anyways we are working on that.

- The Abuja Declaration calls for 15% of the GDP of each African country to be invested on health; it is very ambitious and good idea. But up to now six countries are implementing the Abuja Declaration. Today quite a number of African countries allocate 6%, 10%, 12%, and 18% of their GDP for health. The very interesting thing is our PHC is improving and 15% is not a magic bullet.
- As regards to the issue of brain drain, it is important that people are moving and the directions have changed. Most of the time when we talk about brain drain, Africans move to Europe, America, people keep on moving. They will continue to move and more interestingly the directions would change. Look at it in another way. We cannot do much; there is no quick fix solution. The solution is long term, improving the social development. Let us look at it in another way, how about brain-gain? In my program of labor migration, we try to look at it as to what are we going to benefit from that? So we are organizing the Diaspora, work very closely with the Diaspora and we are collecting legacy project. One of them is African Institute of Remittance. The Institute is in Kenya and what is it doing? What is officially known is that 16 billion dollars are coming in to Africa from the Diaspora. The taxation is 4 billion dollars. So in relation to brain gain what the Institution does is to reduce the taxation; instead of paying 10 or 12 dollars, we decrease it to 2 dollars. We are not to be another Western Union but we are giving many alternatives and competition for the Diaspora.
- On the strengthening of AFPH, I promise a few things. We will try to improve the health of the African people.

Sub-topic 4: “Schools of PH – Increasing Relevance in Health Professional Training”, by Professor Mekonnen Assefa.

He started his presentation by exhaustively explaining the features of the 21st century as follows:

The new century began by pushing the frontiers of knowledge in far reaching discoveries in turbulent environments. In April 2003, the Human Genome +exploration in history, gave us the ability, for the first time, to read nature’s complete genetic blue print for building a human being. This will have far reaching consequence on health: on aging, cancer and so on.

How do we grapple with these new phenomena of the 21st century?

Professor Makonnen went on to say: this being the salient features of the new century, let’s try to see closely ‘health, public health and schools of public health’

What is health? ‘The ability to adapt and self manage in the face of social, physical and emotional challenges’

What is public health? Public health incorporates interdisciplinary approach which implies both breadth and depth (molecular to outer space); Public health is a multidisciplinary subject dealing with a complex creature in complex environments; Public health is the struggle for health care equity, quality and accessibility.

He further provided detailed information about the core functions of public health as follows:

- Providing leadership on matters critical to health and working in a team with various partners when ever needed;
- Shaping a research agenda and stimulating the generation, translation and dissemination of valuable knowledge;
- Setting norms and standards and promoting and monitoring their implementation;
- Articulating ethical and evidence-based policy options;

- Monitoring the health situation and assessing the health trends and public health surveillance for:
 - an early warning system for impending public health emergencies
 - document the impact of an intervention, or track progress towards specified goals
 - monitor and clarify the epidemiology of health problems, allow priority to be set and inform health policy and strategies
 - investigate, diagnose, and monitor health problems and health hazards of the Community;

Having discussed as an introduction the above discoveries and related health issues, Professor Mekonnen, once again, raised the following questions in relation to the Schools of PH.

- How do we get prepared the learning institutions/ schools of public health to grapple with the needs of the 21st century? These are institutions for different levels of academic programs in public health (both for under graduate, graduate and postgraduate)
 - How do we initiate a new academic program in public health schools? The first step is to assess if there is a need: Whose need is it? The need of the different stakeholders: from the general public to international related players by incorporating the dynamics of science and technology?
 - How do we identify these needs?
- Through data gathered from a cross-section of society/different stakeholders, and the dynamics of science and technology;
 - Based on the findings of the data, identify the core competency of the graduate;
 - Based on the core competencies relevant course modules are prepared;
 - Course modules are the important part which helps to achieve the stated core competencies of the graduate.

According to the presenter, course module has three important components: learning hierarchies, domains of education, and objective aligning: content, method, and assessment by incorporating learning hierarchies and domains of education. He said Course learning outcomes aligning with content, method and assessment by incorporating domain of education and hierarchy of learning

He went on to say that in order to address the issue of quality education, during the modular course preparation, components of learning- teaching should aligned. Thus, assessment needs to be carried out in line with the learning outcomes, content, method, domain of education and learning hierarchy. This ensures deep learning.

He also spoke of the three different level degrees that Schools of Public Health are currently offering as follows:

1. **Bachelor:** The one in this country is uniquely designed. It is supposedly designed to combine both preventive and curative components of health. It is mushrooming. MOH is signaling that it has enough graduates of health cadres.
2. **Master**
 - 2.1 Master of Public Health (MPH) is mainly for practicing in a public health setting.
 - 2.2 Master of Science in Public Health (MSPH), this is mainly for academic and research

3. **Doctoral**

Doctoral level training is meant for highest performance on the core functions of public health, so it is helpful to clearly indicate the expected outcome of students both in professional and academic and research areas.

3.1 Doctor of Public Health (Dr PH)

- This is designed for the student who already has an MPH or equivalent degree and who intends to pursue policy analysis, program management, leadership career as a public health professional.

3.2 Doctor of Philosophy (PhD)

- Students focus on the creation of new and innovative knowledge. It is primarily a degree for individuals with aims in public health research or academics.

3.3 Doctor of Science (Sc D)

- This is a degree program as alternative to the PhD degree program. This program is designed for individuals of exceptional ability who seek to establish the methods and skills needed for a career in research – often in academic setting.

Continuing his discussion, Professor Mekonnen said, for all of the above-stated levels of degree in Public Health there is a need for proper preparation in the learning process. He also discussed the prevailing situation (the current outcome) at the different levels of qualification and issues related to accreditation, assessment as well as designing and implementing of appropriate curriculum for public health learning.

Comments and Questions

1. You are telling us that even we are not entitled to be in the academic environment since everyone of us are trained for MPH training. So what it lacks in the training to be MSc. in PH training to be in the academic environment since you are one of the pertinent fashion designers of MPH training in Jimma University?
2. Are you not dealing with the number of MPH training schools, the private schools, government schools that are mushrooming now-a-days in Ethiopia? What should be done to control, monitor, and especially improve the quality of training in Ethiopia?
3. For educational relevance we are focusing on curriculum, but what about other relevant and essential researches that would guide in planning policy and contribute for educational quality, faculty development like having adequate numbers of senior level professionals. UNESCO recommended institutions to have 30% of their teaching staff to be PhD holders, 50% of masters. I am not sure how much our institutions are currently being staffed. Infrastructure like laboratories, skill labs for educational relevance on curriculum, most of them are imported but should have emphasized on local epidemiology, be it communicable or NCDs. This is a good opportunity to have high delegates to be present in such Association meetings to discuss on such issues.

Responses

Professor Makonnen Assefa has reflected on the issues raised as follows:

1. Most of the curriculums are broad and there is no depth. It has been a long time since we started to use it. Curriculum is dynamic but still we are keeping that old curriculum. So, the issue is what is to be done? We have to accept there is a problem in our educational system. We should confront it. We should compete with the so called developed countries. We should know that knowledge is abundant these days.
2. We need senior teachers, libraries, and so on. But it will not be a long time that universities will be options. Knowledge is abundant but you should know how to use it. Remember the four steps of learning. Every one of us could evaluate at what level are we performing? I am sure most of us are at the II level, which is surface level learning. There is knowledge how to do it, knowledge how to reach level III problem-solving, how to reach level IV, to be knowledgeable and creative. There are means; technology is a miracle for me and for poor countries. We are not going to learn the way the traditional teacher was doing. Education is a transformation. Now tertiary education should be universal.

Everybody should go to the tertiary education to live in the planet. It is a complex world moving fast, we should grasp. Technology has given us all the means. What we ask is to have fast and cheap internet connection. Finally, he emphasized on how to learn by oneself, and recommended to look at the internet.

IV. CONCURRENT SESSIONS

Numerous research works, which were conducted in different parts of the country, were presented by young and senior researchers during the three-day Annual Conference and the Silver Jubilee Anniversary of EPHA. All in all 289 papers were presented, out of which 149 were oral and the remaining 140 poster presentations. The topics covered were: HIV/TB, Outbreak, Nutrition, Maternal Health, Environmental Health, Mental Health and Non-Communicable Diseases, Child Health, Health Care Financing, Adolescent Health, Malaria, and Lab based studies.

The oral presentations by different young and senior researchers conducted simultaneously in different rooms during the three day-Conference are presented below.

1. Major topic: Health Care Financing

Moderator: Professor Damen Hailamariam

Presentation 1: 'Willingness to Join and Pay for Community Based Health Insurance among Rural Households of Debub Bench Woreda, Bench Maji Zone, Southwest Ethiopia', by Melaku Haile and et. Al.

As an introduction, it was explained that about 37% of the healthcare expenses is covered out-of pocket in Ethiopia which leads to low utilization of healthcare services. Hence, the government introduced social health insurance and community-based health insurance schemes to tackle the problem and it is being piloted and planned to be scaled-up to cover 83% Ethiopians who mainly live in rural areas.

It was a cross-sectional, quantitative, community-based survey conducted among 8 rural kebeles which were selected randomly. Two stage sampling technique was used to select 845 households as study units.

The objective was to assess the willingness of the rural communities in the study area to enroll the newly proposed Community-Based Health Insurance scheme and to estimate the amount they will pay for the scheme as premium.

The results showed that about 78 % of the respondents were willing to join the scheme. The bid amounts, educational status of the respondents, wealth index, annual income of the households, social capitals, the presences of chronically ill persons in the household, borrowing money for healthcare services, perceived quality of the healthcare service of the district and healthcare cost of the household were significantly associated with the probability of accepting either the initial or second bids. Acceptance of the premium depends on the amount of it. Health related variables are associated with WTP indicating the possibility of adverse selection

Presentation 3: 'Epidemiology of Catastrophic Health Expenditure and Impoverishment as indicators of financial protection in health care system of Ethiopia', by Lioul Berhanu and et. Al.

Ethiopia implements health financing reform activities aimed at increasing service coverage alongside providing financial protection to service users. Hence, this study aims at informing ongoing reforms by analyzing the epidemiology-incidence, intensity, regional distribution and socio-economic predictors of catastrophic health expenditure and impoverishment. Complex sample design analysis was applied. Weighted data from Ethiopian National Household Consumption and Expenditure Survey July 2010 – July 2011, 27,835 HHs were used to generate measures of incidence and intensity of catastrophic health expenditure (poverty head count, mean (positive) overshoot, concentration indicates) and impoverishment applying the World Bank's Poverty line of \$1.25 per person per day were used.

The result showed that catastrophic health expenditure for the 10% threshold expenditure was 3.1% with slightly higher risk among the poor. The relatively low catastrophe incidence is mainly due to limited access to health care. Slight variations in regional catastrophe incidences were noticed; the highest proportion related in Oromia and the lowest in Somali regions. Regarding socio-economic predictors, HHs with unemployed, married and with below 65 years age heads were less likely to suffer catastrophe at 10% threshold. Poverty level increased by 5.20% equating to 3.96 million people when health expenditure was deducted. Hence, modeling studies to assess the possible effect of health expenditures on those who had the need but not the means to access health services should be considered. Evaluating the effect of direct payment among the poor not included in fee waiver or not subsidized in risk-sharing schemes are among the recommendations.

The questions raised were does the catastrophic expenditure go with severity of illness or general poverty of population and why did you ignore indirect costs? The responses made by the presenter were: catastrophic health expenditure has a limitation of not measuring indirect costs. It is usually applied as an input to the health sector and there is no direct relationship between catastrophic expenditures and poverty levels.

Presentation 4: 'Effectiveness of Supportive Supervision on the Quality of integrated Community Cases Management Services in 113 Districts of Ethiopia', by Ali Mehryar Karim et.al.

Many of the under five mortalities can be prevented by the Integrated Community Case Management (ICCM) of common childhood illnesses and the Health Extension Program (HEP) adopted by ICCM in October 2010. Health extension workers (HEWs) were provided six-day ICCM training and given supplies to initiate service. ICCM quality assurance measures were case management registers, post training follow-up at health posts, supportive supervisory visits (SS) at health posts and performance review and clinical mentoring meeting (PRCMM) at the district level.

Hence, the objective of this study was to assess the effectiveness of supportive supervisory visits (SS) to improve the quality of ICCM services provided by the HEWs in the selected areas using longitudinal analysis of program monitoring data collected during SS between January 2011 and June 2013 (30 months). 3,909 SS visits were made using the checklist for SS designed by national technical working group to extract data from ICCM registers and using 22 clinical officers and 4 regional coordinators conducted the visits using the Quality of ICCM service (QoS) as a measurement. Random-effects logistic models were used to assess the effect of SS on QoS. Dose-response relationship was observed between number of SS visits and QoS. Therefore, SS was effective in improving QoS, training followed by SS is essential in rolling out new interventions by the HEP.

Questions raised were: will there be ways of maintaining goals of services and how did you assess quality of services?

The responses made were: supervision should be coupled with monthly meetings at district level and all activities of HEWs should be recorded in registers.

Presentation 5: Drug Utilization at Household Level in Nekemte Town and Surrounding Rural Areas, Western Ethiopia: A cross- Sectional Study, by Edao Sado.

According to the presenter, drug utilization is defined as the marketing, distribution, prescribing, and use of drugs in society, with special emphasis on the resulting medical, social, and economic consequences. The aim of this study was to assess prevalence of drug hoarding, self medication with modern drugs and drug sharing practice at household level. Cross sectional study was conducted from August to September, 2011 in both urban and rural households. The results showed that prevalence of drugs hoarding was found to be

49.9%; where urban prevalence was 54.5% and rural areas' prevalence was 44.5%. Reasons mentioned for hoarding drugs were for future use (56.6%), the drugs were on the use (24.4%) and inaccessibility to health facilities in terms of distance (18.9%). Prevalence of drugs sharing within and/or outside household was found to be 24.9%. Among the 160 respondents who reported an illness in four weeks recall period, 36.7% were self-medicated with modern drugs.

In conclusions, drug hoarding and sharing are prevalent among households in the study areas. Drug hoarding is significantly associated with residence and educational places, while drug sharing is significantly associated only with residence places. Self medication- with modern drug is also prevalent in the study areas. The presenter recommended, among other things, offering of drug education to the general population by incorporating drug use education in health extension packages.

The questions raised were: how was the selection of participants from the HHs? Is bi-variate analysis adequate for significance testing? And is the term 'hoarding' appropriate in this instance?

The responses were, the participants were heads of the HHs; X^2 was also used and 'hoarding of drugs' has been operationally defined for the purpose of this study.

Major topic: HIV/TB

Moderator: Dr. Zenebe Melaku

Presentation 9: Determinants of Loss to Follow-up before HIV Treatment Initiation in Northwest Ethiopia, by Ismael Ahmed and et. al.

As an introduction the presenter explained that adult HIV prevalence rate in Ethiopia is 1.5% (1.9% females and 1.0% males) and that the adult prevalence rate of Amhara Regional State constituted 1.6%. Ethiopia introduced a fee based ART in 2003 and free ART was started in 2005.

The objective of the study was to identify factors associated with pre-ART LTFU among newly enrolled HIV-infected clients in Gondar University Hospital.

A case-control study through chart review of adult HIV clients and newly enrolled in pre-ART care between September 11, 2008 and May 8, 2011 were included in the study. Simple random sampling technique was used to have the sample size of 1089 (Cases: 363 LTFU patients and Controls: 726 who were "in care".)

The conclusions were:

- Clients, who were less ill, were more likely to be LTFU during the pre-ART period.
- The risk of pre-ART LTFU increased progressively with increasing CD4 cell count.
- Being female and married is a protective factor for pre-ART LTFU.
- Clients whose next visit date was not documented on their medical chart were more likely to be LTFU.

Based on the findings different recommendations were made to the policy makers, health care workers and researchers.

To policy makers:

- Integrate variables related to pre-ART patients' retention into HMIS.
- Revise the standard of care for pre-ART patients including early initiation of ART.
- Develop standardized definition of pre-treatment LTFU and appointment system.

To health care workers

- Provide adequate information to pre-ART patients at each visit.
- Improve the quality of records including completeness, record keeping and retrieval system.

To researchers:

- Identify reasons for poor documentation of medical records to identify gaps and possible intervention areas to improve medical information system.

Presentation 10: Adverse Drug Reactions of Highly Active Antiretroviral Therapy on Adult Patients at Debre Markos Referral Hospital, Debre Markos; Ethiopia, by Ashenafi Tadele and et. al.

As an introduction Ashenafi pointed out that the incidence of ADR is between 11%–35.9% and some of the ADRs of ARVs were peripheral neuropathy and lipodystrophy associated with stavudine, Anaemia - zidovudine(3–12%), Hepatotoxicity - nevirapine based (16%), EFV (8%) and rash. In Ethiopia fee-based and free ART started in July 2003 and January 2005 respectively.

The objective of this study was to estimate the incidence of ADRs and to determine risk factors associated with ADRs among HIV positive patients on ARVs at Debre Markos Referral Hospital.

The study design was a retrospective cohort study. The Source population were all adult patients who started ART from September 2005 to August 2010 and the study population were adult patients newly enrolled to free ART at Debre Markos Hospital who were selected by simple random sampling method from the source population.

The sample size was estimated by stpower cox in STATA 11, calculation was based on the assumption that $\alpha = 5\%$, power =80%, the significant predictors assessed from the different study were used to calculate the largest sample size. Data incompleteness was anticipated to be 10%, and then the total sample size was 930.

The results showed that about 90 % of the study participants had CD4 count less than 200 cells/ μ l and the median CD4 count was 116(IQR, 59-167) cells/ μ l, the median hemoglobin value was 12.4(IQR, 10.6-14.0)g/dl, nineteen point six per cent (182) of study participant had TB co-infection and three hundred fifty one (37.7) of the patients were taking d4t-3TC-NVP and 272(29.2) were taking AZT-3TC-NVP.

The Adverse Drug Reactions after initiation of HAART, 214 patients (23.0%) developed at least one adverse event: Zidovudine based regimen - 123 (57.8%) and Stavudine based regimen - 84 (39.3%).

Among the 261 episodes of HAART ADR anemia 65 (25.0%), Fat Change 45 (17.2%), Skin Rash 42 (16.1%) and abdominal pain 26 (10.0%). 13.4% (35) of anemia was occurred in those patients taking zidovudine based regimen.

In this study patients with CD4 50-99 cells/ μ l (AOR=1.9, 95%CI [1.115- 3.364]), d4t-3TC-NVP (AOR=5.8, 95% CI [1.692-9.591]), and AZT-3TC-NVP (AOR= 4.2, 95% CI [1.227-10.673]) were more likely to report the Adverse drug reactions.

In conclusions 214 patients experienced at least one drug adverse event 52 (24.3%) substituted their regimens - 33 of them were due to drug toxicity, and ten patients were due to skin rash.

Based on these findings the researchers recommended that prospective cohort and randomized clinical trials will be required to confirm our findings and time to side effect analysis should be performed to determine the duration of the occurrence of the adverse drug reactions which helps for further precautions.

Major topic: Outbreak

Moderator: Dr. Hailu Yeneneh.

Presentation 13: Measles Outbreak Investigation and Response Report, Kabridahar, November 2013, by Yusuf Mohammed.

At the beginning of the presentation, it was explained that in Ethiopia, measles is among the most common causes of morbidity and mortality in children. In 2012, Ethiopia reported 6953 suspected measles cases from which 4398 cases were laboratory confirmed and annualized measles incidence was 6.1/100'000. Confirmed measles outbreak was repeatedly reported from Ethiopian Somali Region in 2012.

The objectives of this study were to verify and diagnose the existence of the outbreak, to assess the magnitude of the problem, to identify the risk factors so as to undertake public health interventions.

Cross-sectional both descriptive and case control study was conducted. Suspected measles case was defined as any person with fever, rash, cough, and coryza in Kebridahar town from September 5/09/2013 to November 26/11/2013. For every case a single neighborhood control was selected and data was collected and compiled as line list from the patients' registration book. Cases and controls were interviewed using questionnaire and five blood samples were collected. Data were entered, cleared and analyzed using Epi Info 3.5.1. and Microsoft Excel.

The results were starting from 09/14/2013 to 11/20/2013, a total of 272 suspected measles cases were reported, the overall attack rate of the measles outbreak was 79/10,000 population and the overall cases fatality rate was 5/272(1.8%).

Blood samples 4/6 became positive for measles IGM, the council vaccination coverage is 49%, all deaths were not vaccinated and aged 1-4 years.

The researchers concluded that an outbreak of suspected measles occurred in Kebridehar Council affecting primarily those <15 years of age. Identified risk factors included low measles vaccination coverage, late reporting and response were observed and different interventional activities were conducted. The recommendations made were early notification and response, strengthening routine measles vaccination and vitamin A supplementation and providing health promotion information with messages emphasizing measles prevention and control.

Questions raised by the participants were:

The data were collected from patients' card, is it possible to make all using patients cards?

Response: Yes, the data were prepared from patients' card after a line list was prepared.

Why that one of the kebeles was highly affected?

Response: New people came from other places to settle. The coverage is 49%; so there is high risk on the unvaccinated children.

Presentation 14: Measles outbreak in Yemalogi Wolel woreda, Oromia: Need for Monitoring System Operation and Immunization Quality, by T. Afework.

The method used was listing to characterize the patients, reviewed documents and made discussions with different stakeholders in the kebele. House to house case search was made using the case definition. Associated factors were determined by frequency age matched case control study of 3 controls for every case.

The result showed that totally there were 232 cases, one health facility death and five community deaths were identified. The overall attack rate was 4% while age-specific attack rates were 19% and 13% for <1 and < 5 years old children respectively. Case fatality rate was 0.4% excluding the 5 community report deaths. As to the vaccination, 48% of cases were vaccinated, 43% were not vaccinated and the remaining 9% had unknown status. On bi-variant analysis, being not vaccinated at or after 9 months, playing or sleeping with sick children were found to be significantly associated with the illness.

Finally the researcher recommended that children in the risk pool should be vaccinated, immunization system operation and involved procedures should be monitored at each level of the service delivery.

Presentation 15: Prevalence and Risk Factors of *Helicobacter pylori* among adults at Jinka Zonal Hospital, Debub Omo Zone, Southwest Ethiopia, by Getnet Hailu, et. al.

In his introduction, the presenter pointed out *H. pylori* is the most common chronic bacterial infection in humans, nearly 50% of the world's population is estimated to be infected with this disease and 30-40% persons are in developed countries and 80-90% persons in developing countries. This is due to strongly correlated with socio-economic status and living conditions early in life. Poor socio-economic status, precarious hygiene standards, over-crowding, and contaminated environment and water sources are the possible risk factors.

The general objective was to determine the prevalence and risk factors for *Helicobacter pylori* infection among adults at Jinka Zonal Hospital. The study design was hospital based cross sectional study using close ended questionnaire based survey and pylori stool antigen test stool microscopy: Direct microscopy and formal-ether sedimentation technique and ABO blood grouping. Source populations were all adults who visited the hospital and study population were all adults who had upper gastrointestinal symptoms (uGIT) who visited the hospital during the study period.

A total of 349 individuals who had UGI symptoms were enrolled. *H. pylori* antigen was detected in 177 subjects, yielding an overall prevalence of 50.7%. Statistical significance associations were noted between males and *H. pylori* infection, OR=1.98(95%CI 1.42-3.29, p=0.011). High prevalence was obtained in pastoralist (67%) and merchants (60%). But significance association were obtained with agrarians, (OR=1.85(95%CI 1.02-3.39, p=0.045). The odds of *H. pylori* infection were low in those who drank alcohol less than once a week, [OR= 0.39 (95% CI 0.23-0.67, p=0.001)]. The odds of *H. pylori* infection in those containing ≥ 5 persons in the same house were high. Hence, crowding is an independent predictor of *H. pylori* infection. Prevalence of *H. pylori* infection was high in those who practiced open field defecation/no toilet; (73.5%). Significance association between latrine usage and *H. pylori* infection, (p<0.05) and the odds of *H. pylori* infection were high in those who never used toilet, OR=6.75(95%CI 2.11-21.6, p=0.001). The odds of *H. pylori* infection that never wash their hands after toilet were 2.86 times more than those who washed always their hands, OR=2.86(95%CI 1.30-3.27, p=0.009).

In this study, although the most frequent blood group was blood type O (43%), no statistical significance association were noted (p>0.05). From those infected with intestinal parasites, 96 (47.5%) were positive for *H. pylori* fecal antigen. No significance association was obtained between *H. pylori* infection and intestinal parasites.

Increasing the awareness of the communities toward good hygienic practices reduce the transmission of *H. pylori* infection and laboratory diagnostic tests for *Helicobacter pylori* should be operational at the study area were recommended.

Finally, two questions were forwarded to the presenter: The first is why early living is a risk factor? And the second is educational level as a factor? It was responded that early living is a risk factor because it is associated to the early life and educational level was not having any significance association.

Presentation 17: Risky sexual practice and associated factors among university students, Ambo, Ethiopia, by Meseret Ifa and et. al.

In his introduction, the presenter said that globally, many youth have had sexual intercourse and are at risk of unintended pregnancy and sexually transmitted diseases including HIV/AIDS. Early sexual initiation, inconsistent condom use and having multiple sexual partners are among the risky sexual behaviors that lead to unintended pregnancy, abortion, and STI, including HIV.

Hence, the general objective of this study was to assess risky sexual practice and associated factors among Ambo University under graduate regular students.

A cross-sectional study was conducted and eight hundred seventy eight respondents were included in the study. Among the study participants, 344 (39.2%), 44.6% and 31.9% of male and female respectively, have ever initiated sexual inter course, mean age of first sex = 18.2 ± 1.93 years.

The reasons for first sex were: in love with their boy/girlfriends (75%), marriage (6.7%), for benefit (6.1%), substance use (5.5%), and forced/rape (3.8%).

Among those who ever had sex (n=344): 12.2% had practiced their first sex during/after using substances like alcohol and/or khat, about half of them did not use any preventive family planning method during their first sex and 32.8% had life time multiple sexual partners.

Among those who have ever practiced sex (n=344), 49.7% reported that they were sexually active while in university. The sexual partners were boy/girl friends (71.9%), casual partners (13.5%), commercial sex workers 15 (8.8%) and 21.5% of them had multiple sexual partners since they joined the university.

Reasons for practicing sex after joining the university, n=171, were personal desire (63%), peer pressure, material/financial benefit (10%) and need for support in education 5%. Among the respondents who have ever had sex: 86.3% have ever used condom, 52% have used condom inconsistently, 38.2% didn't use condom during their last sex. Major reasons for not using condom during last sex: Partner trust (44.4%), unavailability of condom (25.6%), decrease pleasure (13.5%), and others (lack of awareness (10.5%), fear of partner rejection (5.3%), cost of condom (4.5%) and fear of abuse (0.03%).

It was concluded that a significant number of students were found to be engaged in risky sexual practices resulting in unintended pregnancy, unsafe abortion and contracting STIs including HIV/AIDS. Therefore, appropriate behavioral change activities and provision of reproductive health services addressing the major identified determinant factors of risky sexual practice and periodic behavioral and reproductive health service related assessment are required.

Questions raised were: Have you ever felt the influence of media in the research/thesis? And what does 32% life time partners mean?

The presenter responded that media was not touched but internet and phonograph were used. Life time partner means that they have multi-sexual partner until the study period.

Major topic: Nutrition (numbers 18, 19, 20, 22, and 23 were presented)

Moderator: Ato Seifu Hagos

Presentation 18: Effect of Maternal Iron Deficiency Anemia on Iron Store of Term Newborns at St. Paul's Hospital, Selam and Gulelie health centers, Addis Ababa, Ethiopia, by Betelihem Terefe

In the introductory part it was explained that globally, iron deficiency anemia (IDA) in pregnancy has the prevalence of 39.9 - 43.8% in developing countries. It is widely prevalent and more severe, frequently coexisting with maternal malnutrition. Ethiopian pregnant women have anemia prevalence of 62.7% and women of reproductive age have IDA prevalence of 17%. It causes: behavioral and cognitive delays, lower resistance to infections and increase absorption of lead.

The two main sources of iron for infants of 0-6 months are acquired and stored during the pregnancy and ingested through breast milk after birth.

The main objective of this study was to assess the effect of maternal IDA on the iron store of term newborns delivered at St. Paul's Hospital, Selam and Gulelie health centers, and to determine the correlation between Serum Ferritin (SF) and Hemoglobin (Hgb) of mothers and their newborns. Cross sectional design was utilized on pregnant women with singleton live birth, gestational age between 37 and 42 weeks and their respective newborns were study participants. Data were collected using interviewer administered questionnaires and laboratory analysis of Complete Blood Count (CBC) and SF were confirmed. The results were based on both the Hgb and serum ferritin levels. Pregnant women were classified into three groups: iron deficient anemic (IDA) n=27, 30.5%, iron deficient non anemic (IDNA) n=29, 41.1%, and non iron deficient non anemic (NIDNA) n=39, 28.4%.

The results also suggest that maternal ferritin status does have influence on the iron store of the newborn. However, the ferritin levels between newborns delivered from IDA and IDNA pregnant women were not statistically different. Only mild and moderate cases were identified in the studied pregnant women. Implying the maternal Hgb concentration does have an impact on the Hgb level of the newborn. Maternal

ferritin level and hemoglobin level have strong influence on newborn's hemoglobin and ferritin level. Based on the findings it is concluded that maternal iron deficiency anemia may affect the iron stores of newborns and infants born from IDA mothers be screened for their iron store status at birth.

The following questions were asked and responded as follows:

- How is the quality assured? *Standardized procedure and testing were done.*
- Would it be reliable to use a one day fasting blood? *This is the limitation of the study.*
- What do you mean for alteration? *It means change or increase.*
- How were controls selected? *They were selected from healthy individuals.*
- Why copper increased in DM? *It is because copper is a by-product of hypoglycemia.*

Presentation 20: Assessment of maternal risk factors associated with full-term low birth weight Neonates in public health institutions of Addis Ababa, Ethiopia: a case-control study, by *Mahari Yihdego, et.al.*

As an introduction some standard definitions by WHO were discussed; birth weight is the first weight of the newborn obtained after birth and LBW as birth weight less than 2,500 grams. Birth weight is governed by two major processes: duration of gestation and intrauterine growth rate. According to UNICEF, 2004, more than 20 million infants are born each year weighing less than 2500 grams, accounting for 17% (96%) of all births in the developing world. According to EDHS 2011, among children born with a reported birth weight in Addis Ababa, 11.4% weighed less than 2500 grams. The conceptual frame work illustrates the distal, intermediate and proximal factors of term LBW.

The objective of this study was to determine the maternal risk factors associated with full term low birth weight neonates in selected public health institutions of Addis Ababa. A facility based unmatched case-control study design was used. The cases (147) were mothers who gave birth to a term LBW (<2500grams) neonate and the controls (294) were subsequent/consecutive two mothers who gave birth to a term normal birth weight ($\geq$ 2500grams) neonate. Data were collected using structured questionnaire, medical records and actual measurements such as weight of the neonates, height and MUAC of the mother were taken.

The results showed that, 417 term newborns were included. The mean birth weights were 2199.5 gm. (S.D $\pm$ 252.79) and 3230.0 gm. (S.D $\pm$ 449.73) for the neonates with low and normal birth weights respectively. In conclusion the determinant factors for term LBW were: ANC visits of three or less, not taking antenatal iron tablet supplementation, gestational weight gain of less than 8 Kg, maternal MUAC of less than 23 cm and height of less than 155 cm, experiencing antenatal intimate partner violence and experiencing antenatal depression of any grade.

Based on these findings, the following recommendations were made: to ensure women return after their ANC visit and reduce dropout, routine antenatal iron tablet supplementation for a minimum 31 days, standardized protocols for assessment and intervention of depressive symptoms and violence and design programs to increase pre-pregnancy weight and weight gain during pregnancy. It was also recommended for further researches on to create nationally appropriate growth curves for pregnant women, holistic understanding on the relationships among pregnancy, violence and depression and RCTs that assess the effect of multiple micronutrients on birth outcomes.

The following questions were asked and reflections given as follow:

- Did you control the confounding factors? *During the analysis we had controlled possible confounding factors.*
- What is the relationship between domestic violence and LBW? *The study used standardized conceptual frame work and it was found as one of the determinant factors.*

Presentation 22: “Prevalence and associated factors of overweight and obesity among high school adolescents in urban communities of Hawassa, southern Ethiopia,” by Tesfalem Teshome.

According to WHO, overweight or obesity is defined as a condition of abnormal or excessive fat accumulation in adipose tissue to the extent that health may be impaired. It is one of the top ten health risks in the world and one of the top five in developed nations and considered as an emerging public health issue in developing countries.

Thus, the present study aims to provide baseline and reference data on its prevalence and associated factors among high school adolescents in Hawassa city. It was institution based cross sectional study with adolescents' age 10-19 belonging to all high schools in Hawassa city as source population. A stratified sampling technique was used to select the samples. Data was collected using self administered and pre-tested questionnaires that were adapted from WHO steps instrument for chronic disease risk surveillance and dietary patterns were assessed using self administered qualitative FFQ, Anthropometric measurements, height, weight, TSFT and BMI measured using standard measurements. The new WHO and the Must *et al.*, reference data were used for classification of BMI and TSFT respectively. Assessment of the physical activity pattern was conducted by using the WHO GPAQ and the activity level were evaluated according to the standard WHO total physical activity calculation guide.

The results showed that 554 participants were involved and among whom 216 (39.0%) were from 9th grade. It was found out that the median BMI of 19.8 kg/m² (14.2 - 37.7 kg/m²) while the median values of TSFT were 11.5 mm (3.5-41 mm). The prevalence of overweight and obesity based on BMI for age classification were 12.9 % and 2.7% respectively and based on TSFT classification 11.0% and 3.8% respectively. The sex specific prevalence of overweight and obesity were found to be 5.7% and 1.1 % boys and 20.2% and 4.4 % girls respectively.

Accordingly, school ownership, sex of the participants, head of the household, time spent watching television/using computer, mother's occupation, consumption of fruit, vegetables, meat, egg, sweet, fast food, TPA and socio economic index were found to be significantly associate with being overweight ($p < 0.05$).

In conclusion, more than one tenth of adolescents were overweight, making it a hidden problem of Hawassa city. Based on this, educating adolescents and families from higher socioeconomic status on healthy eating habits and the positive consequences of physical activity, limiting adolescents time spending on screen, school based preventive program and intervention should be set targeting adolescent girls and private schools, and to provide stronger evidence of causality experimental research are recommended.

The following questions were asked and answers provided:

- How are students from government schools less likely to be overweight? *The students from private school are not exercising; eat fat-bound foods, less exercise and more sedentary life.*
- What is the reason for alarming obesity? *The obesity level is alarming in Hawassa and further studies may be needed to understand.*
- What is the definition of fast food? *Fast foods include sweets, sodas, and so on.*
- How is SES measured? *We cannot rely on adolescent response on their respective income. These are included as key household assets questions.*

Presentation 23: “Assessment of Prevalence and Associated Factors of Under Nutrition Among Children Of Under- Five Years of Age in Haramaya District East Hararge , Oromiya Regional State, East Ethiopia,” by Hiwot Yisak.

As a background the types of under nutrition were listed as underweight, wasting and stunting and underweight is defined as a composite index of weight-for-age and it takes into account both acute and chronic malnutrition. Stunting is a composite index of height-for-age, and it is a sign of poor nutritional

history and wasting is a composite index of weight-for height and it is a sign of current under nutrition. The WHO cut-off points for diagnosing under nutrition by anthropometry include Z-scores < -1 , < -2 and < -3 for mild, moderate, and severe malnutrition classifications respectively. The consequences of under nutrition are mortality, illness, and intelligence loss and reduced productivity. Under nutrition is also an inter-generational problem.

The general objective of the study was to assess the prevalence and associated factors of under nutrition among children of under five years old. Community based cross-sectional quantitative study was conducted from December 1, 2012 to January 30, 2013. The study subjects were each child, less than five years and his/her mother or care taker and were chosen by systematic random method in each kebele. The study employed multi stage cluster sampling technique and interview was conducted to fill the questionnaire and anthropometric measurements were also done as means of data Collection.

A total of 791 mothers with their under five children were involved. The results showed that from the total mothers for whom anthropometric measurements were done, 118 (15%) of them were underweight (BMI <18.5) which was 19 (8.2%) among urban and 99 (17.9%) among rural residents. The prevalence of wasting, stunting and underweight were 10.7 % 45.8%, and 21% respectively. The prevalence of severe under nutrition was 5.2%, 31.6%, and 5.6% for wasting, stunting and underweight respectively. About 21 (2.7%) were undernourished for all of the three indicators; and it accounted 7 (3%) in urban and 14 (2.5%) in rural kebeles. Factors associated with underweight were children having diarrhea in the past two weeks prior to the study, mothers with BMI <18.5 and who did not have ANC visit during pregnancy, and birth order 4-5 children. Factors associated with wasting were being wasted; children who were served food with family, children who had fever in the past two weeks prior to the study and households who used pit dispose garbage. Factors associated with stunting were 3 times higher among rural, regarding number of under-fives in the family, children which were used to live in households above one under five child, and those mothers or care takers who wash their hands usually with soap.

In conclusion, under nutrition especially stunting is a serious public health problem among under-five children in the study area. HEW and Health professionals should work hard on nutrition education at community level and health planners have to give attention to mothers and reproductive age group women during nutrition intervention programs were recommended.

The following questions were asked and a response given as follows:

- What is the relevance of this study? *There was no similar study in Haramya.*
- Were the questionnaires pretested? *All questionnaires were pretested.*

Major topic: Maternal Health

Moderator: Professor Mesganaw Fentahun.

Presentation 24: *Adoption of contraception in the extended postpartum period is low in northwest Ethiopia,* by Zelalem Birhanu, et. al.

As a background it was emphasized that while breastfeeding and amenorrhea have a substantial impact on potential fertility, higher levels of BF alone are not an effective means and not reliable for every women to reduce high fertility on an alternative to contraception. Contraception is critical for women in the postpartum period to prevent unintended pregnancy and reduce the lifetime risk of maternal mortality by safe birth intervals.

The objective of this study was to find out postpartum contraceptive usage and identify the different variables which affect the postpartum contraception among women of Dabat district. In this regard, all married women aged between 15-49 years who had delivered a child from January 1, 2012 to December 30, 2012 at Dabat Research Center were interviewed by house to house survey. The results indicated that only 10.34% mothers adopted contraception in the extended postpartum period. Women delivered by the

help of a skilled attendant and had post natal care service utilization was more likely to use contraceptives. Secondary and above level of husband education was also the variable that affects postpartum contraceptive use significantly.

In conclusion, contraceptive use in the extended postpartum period was found to be low. Hence, it is recommended that improving utilization of institutional delivery by skilled attendants and postnatal care services are highly important to increase contraceptive use in the postpartum period.

One question raised was: what are the new findings or new knowledge that was gained from this study? *There were little or no knowledge about adoption of contraception in the extended postpartum period. Women only depended on BF for contraception. The findings have implications for education of women and targeting specific groups of women.*

Presentation 25: "Perinatal Mortality Among Cohorts Of Pregnant Women In North Shewa Oromia Region: Magnitude, Determinants and Causes," by Elias Merdassa et. al.

Successive DHS reports showed perinatal mortality rate as 52 per 1000 during 2000, 37 per 1000 live birth in 2005 and 46 per 1000 live births in 2011 showing a higher rate of deaths among women living in rural areas. Oromia region accounted for about the regional prevalence of 45 per 1000 where this study was done. This shows an increasing trend between the 2005 and current DHS.

This study intends to assess the magnitude, causes and determinants of perinatal mortality that will provide some inputs for the health program managers and policy makers to formulate appropriate intervention strategies to reduce perinatal mortality.

From 84,558 women found in the three districts, an open cohort of 4,438 pregnant women was established by the mid 2010 in three districts (Degem, Kuyu, Warajerso) of North Shewa Zone of Oromia Regional State. New pregnant women who were not registered were entering into the cohort around 28 weeks of gestation and followed until 48 hours of postnatal care. After being part of the cohort every mother was followed by trained frontline worker (FLW) teams till the outcome of the pregnancy occurred. All perinatal mortality reported (still birth and early neonatal mortality) from March 2011 until the end of February 2012 from the cohorts taken as cases. For every case of perinatal death, two controls neighborhood live birth and infant survived the first week after birth were randomly interviewed from the same Gote (small administrative segment) with the died infant.

Data were collected from 219 mothers of whom 73 were perinatal deaths while 146 live births those survived the perinatal period were taken as controls. Twenty six [(5.9 per 1000 live births) CI: 3.9-8.4] of the deaths were still births. Forty seven [(10.2 per 1000 live births) CI: 3.9-8.4] were early neonatal deaths. 152 out of 219 women received Tetanus Toxoid vaccine of which 108 out of 152 had two or three doses. The majority 133 (60.7%) of the women have to walk from one to two hours to get care from any of the health institution found in their vicinity. About 106(48.4%) women get postnatal care within the first week of delivery. Most 178 (88.6%) of the babies were born at home while 23 (11.4%) gave birth at health institution. Only 23 (11.4%) deliveries were assisted by health professionals. About 25 (11.4%) and 49 (22.4%) of the mothers encountered abortion and neonatal deaths respectively. The analysis showed that infant born to mothers older than 35 years of age were eleven times at risk of perinatal death; Male babies were four times at risk of death during perinatal period. HHs having family size five and six and more reduced perinatal mortality; women having previous history of neonatal mortality, pre-term birth, institutional delivery and women with two and above parity were all associated with an increased risk of perinatal mortality.

In conclusion, the identified determinants and causes of perinatal mortality are closely linked to the causes of maternal mortality. Hence, programs, policies and interventions need to be formulated in such a way that can address both child and maternal issues in an integrated manner. FMOH, Woreda Health Offices and

NGOs working in areas related to maternal and child health should give due attention to the indicated major causes of deaths. As most births are being assisted by traditional birth attendants at home, basic delivery and child care skills should be given for all TBA by woreda health offices.

The following questions were asked by the participants and answered by the presenter:

1. Are you recommending that deliveries be conducted by TBAs? Is it in line with the policy of the country? We are recommending delivery to be assisted by TBAs because the great majority of the women preferred to be assisted by women during delivery.
2. What are your recommendations to deal with the main causes of perinatal mortality? We believe that clean and safe delivery will minimize complications and mortality due to sepsis, asphyxia and prematurity.

Presentation 28: “Trends and determinants of unmet need for FP and program options in Ethiopia, DHS 2000”, by Wondimu Ayele and et. al.

Contraceptive use prevents unintended pregnancies, abortion and deaths related to pregnancy and child birth. The main objective of this report was to show the level of unmet need for FP based on the recently developed algorithm for measuring unmet need to get a consistent measure over the years 2000 – 2011. The data used were taken from EDHS conducted in 2000, 2005, and 2011. A total of 29,142 currently married women aged 15 – 49 obtained from the three survey years were considered for the analysis. The analysis showed that unmet need for FP has decreased over time as contraceptive use has risen. From 2000 to 2011, unmet need for FP declined by 10.3 absolute percentage points, from 36.6% in 2000 to 26.3% in 2011. The result showed that there was 38% decline in unmet need for limiting while it was only 21% for spacing. The prevalence of contraceptive use increased substantially from 8% in 2000 to nearly 30% in 2011. Demand satisfied increased around three-fold from 18% from 2000 to 52% in 2011. Women in rural areas showed high levels of unmet need compared with women in urban areas. Among currently married women, DHS survey year, number of living children, women’s current age, age at first marriage, education level, religion affiliation, media exposure to FP messages, wealth index and residence were significantly predictors of unmet need to limit and space birth separately. Partner’s education and visit by FP worker were predictors of unmet need for spacing only.

In conclusion, the unmet need for FP has significantly decreased in Ethiopia last decade. Socio-demographic factor such as education level, partner education, religion, HH wealth, DHS survey year, number of living children, residence, media exposure were independent predictors of unmet need for FP.

The question raised was what is the contribution of this study in addition to what is known about unmet need for FP? It was responded that the study used the revised definition of unmet need for FP of DHS 2000 – 2011 and came up with more accurate estimates that have implications for actions. It also increases comparability with other countries.

Major topic: Environment

Moderator: Dr. Tesfaye Bulto

Presentation 29: Solid waste characteristics, quantity and recycling potential, and environmental benefits of management options: the case of Hawassa University, by Hunachew Beyene.

Mr. Hunachew started his presentation by putting some introductions by defining Solid Waste as solid in nature, considered no useful and a misplaced resource; and Institutional Wastes as solid component of MSW (all the wastes generated in a community with the exception of industrial process wastes and agricultural solid wastes). And what are the impacts? Improper management of solid waste results in environmental pollution - public health problems; release of the Green House Gases CO₂, CH₄, N₂O, and PFCs having different heat-trapping potential and contributes to 3.6% of total GHGs emission; hence, the

main objectives of solid waste management are to protect human health and the environment, and to conserve resources.

The objectives of this study were to analyze types of wastes generated at the campus and to estimate the daily solid waste generation rate, and determine its recyclable potential.

The study was conducted at the 3 campuses of the University. The campuses were selected based on their direct or indirect contribution for the pollution of Hawassa Lake.

The major findings were a total of 3557.8 kg of waste were generated per day in the 3 campuses of the university.

- More than 95% of the waste constituents can be converted in one or more useful forms.
- There is no any source reduction, recycling, composting, proper land filling or incineration practices in place.
- The amount of putrescible wastes including paper generated per day is 3172.92 kg, which is 90% of the total amount which is equivalent to 1158.1 tons per year.

He had clearly shown the management options as Reduction – at the production point, Reuse, Recycling, Composting, Incineration, and Land filling.

GHG Reduction: If the university diverts the current putrescible wastes and paper to composting or recycling, it will decrease the net greenhouse gas flux by about 301110 to 544314 kg CO₂ eq.

Finally he recommended that initiation from the university need to be there - to implement ISW as a model institution; continuous awareness creation to the community of the university and the town community using the local media and staff and students in various schools and departments need to conduct further research.

Presentation 30: “Effectiveness of Household Water Chlorination Reduces Incidence of Diarrhea among Under-Five Children in Eastern Ethiopia: A Cluster Randomized Controlled Trial”, by Bezatu Mengistie.

The investigator started his presentation by highlighting the definition of diarrhea as three or more loose or watery stools in 24 hours or more frequently than normal for an individual and explained the condition of diarrheal diseases that kill 1.5 million people mostly children under the age of five years in developing countries each year. Many of infectious agents causing diarrhea are potentially water borne transmitted through contaminated water. He said the Millennium Development Goal (MDG) of drinking water is achieved in 2012. However, the effect of household water disinfection with chlorine on diarrhea episode reduction is variable, ranging from no protective effect to 85 percent reduction.

The objectives of this study were to assess the acceptability of household chlorination and to determine the effectiveness of household water chlorination in reducing diarrhea incidence among children under-five years of age.

The study was conducted in KD-HRC Field Site, Kersa district, Eastern Ethiopia. It was selected by Haramaya University in 2007 to serve as demographic surveillance and health research center. Randomized controlled, parallel group, field trial to assess the effectiveness of household chlorination in reducing diarrhea episode was conducted. Thirty six clusters were randomly selected; field workers conducted census, identified households in the selected clusters that had at least one child under-five years of age; twenty four children (median of 16 households) were selected in each cluster by using simple random sampling. The sample size was calculated using methods published by Hayes and Bennett.

Sodium hypochlorite 1.25% (locally known as “Water Gaurd”) distributed for all the households in the intervention arm. Local women were selected to distribute sodium hypochlorite for the intervention households with no charge for 16-weeks from June to October 2011. They also explained how to treat water with chlorine and demonstrated how to use the disinfectant, control groups continued their usual

practice with respect to drinking water and both intervention and control groups collected and stored water with 20 liter cans.

The primary outcome was the occurrence of diarrhea among children under-five years of age. The secondary outcome was compliance of the intervention. It was assessed on regular weekly and two unannounced visits using free residual chlorine measured with residual chlorine test kit (Wagtech 225 comparator color disc). Water samples were collected for bacteriological analysis at the baseline and at the end of the study multiple tube fermentation technique was used to determine *Escherichia coli* which are regarded as the most reliable indicators of fecal contamination.

Data were obtained from 425 children (284 households) in the intervention group and 420 children (285 households) in the control group. Data was collected on the occurrence of diarrhea for 13,499 person week observation representing 98.03% and 97% of the total person week observation in intervention and controls groups respectively.

Concerning diarrheal incidence: Control Group = 700 episodes of diarrhea (10.4 episodes per 100 PWO), Intervention group = 307 episodes (4.5 episodes per 100 PWO). The effect of the intervention was different among the children with different age groups. It reduced 63% and 53% of the burden among children 3 to 4 years and 1 to 2 years of age respectively, while the reduction was lesser in less than one year children (44%). There was a 58% overall reduction in the incidence of diarrhea among the intervention group compared to the controls.

Finally the presenter recommended the following:

- Household water treatment should be promoted and implemented in rural community where access to safe water is limited;
- Household water chlorination can be promoted and implemented in rural areas by local organization and community members;
- Implementing point-of-use chlorination needs creating demand; ensure supply and continuous improvement of program implementation; and
- Long term studies on effectiveness of household water chlorination in reducing diarrhea mortality

One concern expressed by a participant was: how the confounding factors were collected? The researcher responded that it was controlled by randomization and the study focused on Chlorine as an intervention.

The moderator commented that the study is useful as it deals with one of the main killers of under five children. The intervention is useful but needs promotion and the findings of this study will be evidences.

Presentation 31: “Spatial and Temporal Distribution of Fecal Indicator and Multidrug Resistant Bacteria in a Multiple-Use Fresh Water Lake: The case of Lake Hawassa”, by Deresse Daka.

As an introduction the presenter mentioned that aquatic environments near cities are usually prone to overloading with a variety of pollutants either through direct or indirect discharges. This situation may be worsened by the indiscriminate disposal of untreated wastes, which are often heavily laden with sewage into actively used waters. Sewage polluted waters carry sewage microorganisms, some of which are pathogenic to humans.

He said the general objective of the study was to assess the extent of temporal and spatial levels of microbial pollution and sources of pollution of lake Hawassa and the specific objectives were to assess the water quality characteristics of the lake with respect to microbial pollution of fecal origin, to indicate the sources of microbial contamination at the lake and to determine the resistant pattern of the isolated organisms. Hawassa Lake is the receiving water body for the waste water of different small to large scale industries, health care institutions and hotels, and the flood from town. Thus, different pathogenic microorganisms might contaminate those peoples who have direct contact to the lake who are at risk of contracting diseases.

The method utilized: Cross-sectional and the sampling campaign was conducted twice during the dry and rainy seasons: A study indicated that stormy events contained higher bacterial concentrations than dry-weather flow.

He went on to explain the method utilized as a total of 12 at first round and 14 lake water at second round) were purposely collected. Entry points for incoming streams, waste receiving sites, areas upstream of anthropogenic impact, recreational and bathing sites were considered. Samples were collected by removing the seal, and then placing the mouth of the 250 ml sterile bottles. Approximately 10 cm beneath the surface of the water until the container is almost full. The pre-labeled container was then sealed and placed on ice in a cooler in the boat. Samples were kept on ice until they were analyzed in the lab. Microbiological analyses were done using MSA, Macconkey agar media, Nutrient agar, Peptone water, Blood agar. Biochemical tests including Urea test, TSI, Lyasin agar, Indole test, H₂S tests were done. Antibiotic sensitivity tests were done using different antibiotics (Amp, Norf, Gent. CRO, Pen, Van and Amoxa) on Muller Hinton agar disk diffusion method.

The results showed all of the samples were positive for pathogenic bacteria for gram positive and gram negative bacteria. The most common bacteria identified from the samples were Enterobacteriaceae: *E. coli*, Salmonella Species, Shigella species, Proteus spp, *P. aeruginosa* and gram positive bacteria (*S. aureus*). The predominant bacteria that found from the sample were *E. coli* 14(100%) at 2nd round and 66.6% at 1st round of the total sample followed by Salmonella and Shigella Species. All of them are resistant to Ampicillin and Penicillin. However, few strains are sensitive to other antibiotics. The highest total coli form count was seen in Tikur wohe, Amora gedel and Green wood and the bacteria count of the study was high at summer (Nov 13-15, 2015) than the winter.

All organisms identified from the Lake Hawassa were multi drug resistant (not sensitive for 2 and above antibiotics applied in-vitro). Penicillin and Amoxicillin were not working for all bacteria isolates. Salmonella species were only sensitive to Norfloxacin and Gentamycin.

In conclusion, the researcher summarized that the occurrence of pathogenic bacteria in Lake Hawassa is very high and all are multidrug resistant and he recommended that advanced investigation and protection of the lake from pollution would be crucial.

Finally, the moderator commented that it was a very useful study of the lake frequently used for recreation and the evidence needs to be widely shared for action.

Presentation 32: “Healthcare waste generation and management practice in government health centers of Addis Ababa, Ethiopia,” by Menelik Legesse and et. al.

As introduction, the presenter said local policy showed that the generator of waste was responsible for the proper management, treatment and disposal of waste but has remained on paper and is yet to be implemented. Study in Ethiopia showed the mean ($\pm$ SD) of healthcare waste generation rate per health center was 1.79 ± 0.57 kg/day. Of which (52.0%) 0.93 ± 0.3 kg/day and (48.0%) 0.86 ± 0.33 kg/day were general or non-hazardous waste and hazardous, respectively.

The study focused on the health center because they are the primary health care units in the city. The Addis Ababa City Administration plans in the near future to build health centers in every Woreda.

The general objective of this study, according to the presenter, was to assess the existing generation and management practice of healthcare wastes in selected government health centers of Addis Ababa city with the specific objectives of assessing the health care waste generation rate, describing the type of healthcare waste and assessing the practice of waste management at the selected government health centers.

Institutional based cross-sectional study was conducted to quantify waste generation rate. The source population was 26 government health centers in 10 sub-cities. The study population in 10 health centers was selected by simple random sampling.

The study results showed that the waste management in half of the health centers didn't have separate containers for the collection of hazardous and non hazardous wastes and three out of ten health centers; the waste handlers didn't wear heavy duty gloves and sturdy shoes while working. On the other hand, all health centers used open bucket for the transportation of HCWs. Treatment of wastes weren't thought by all health centers. All health centers used destruction by burning for onsite treatment practice but dumping and incineration were used for placenta and other HCW disposal, respectively. Five of the health centers burial sites were away from any of the water source and on the other hand, three of the health centers have not fulfilled the standard of the placenta pit.

Six out of ten health centers management had no concern about the HCW management as their routine work while seven health centers managers agreed that HCWs pose y risk to their waste collectors. Four of the health centers had no registration book for any injury or HCW contamination to their staff.

In conclusion, the researcher had explained that the mean of healthcare waste generated in all health centers was greater in amount when compared to similar study in the country. Placenta pit in three HCs showed that they were not convenient to waste handlers and to the public and the environment by releasing bad odor to the atmosphere, accessible for vector breeding and over flow during the summer season. Training was not given to all healthcare workers and waste handlers about healthcare waste management and preparation of Standard Operational Procedures and healthcare waste management system had been given very little attention in all health centers, segregation and treatment of HCW were not practiced. This exposes healthcare workers, waste handlers and the public to health risks. All health centers have incinerators but mixed disposal of wastes for burning can lead to unhealthy and hazardous environment, soil and water contamination is more likely to occur. The existence of health centers near to public residences also has the chance of getting pollution to the atmospheric air.

Based on the above findings, the researcher recommended the following:

- Segregation should be done at point of generation with colored and/or marked containers.
- Puncture and leak proof containers with a lid should be used during transportation to the disposal site in order to minimize the risks.
- Pretreatment of infectious waste and liquid waste must be practiced before disposing to the environment.
- Incinerators must be fenced; air inlets should be built to the sides to facilitate complete combustion.
- Training given on health care waste management for waste handlers and healthcare workers should bring change in practice and management.
- Healthcare waste management committee must be established at all level of the health facilities and standard operational procedures must be put in place at all levels of healthcare facilities including counter signing offices
- Further research on healthcare waste generation rate at different seasons need to be conducted.

Although no questions were raised from the audiences, the moderator commented that pathological wastes are becoming serious concern and the study should be presented to the policy makers for action.

Presentation 33: "Workplace hazard assessment in traditional weaving and how to regulate standards in the informal sectors in Ethiopia", by Yifoker Tefera et al.

As an introduction, the researcher pointed out that recent ILO report indicates that globally there are 168 million child labor (age 5-17 years), 85 million children in hazardous works and the incidence is highest in Sub-Saharan Africa.

Nationally, E-FACE project, Ethiopia Fighting against Child Labor works in a Consortium with WVE, MEDA & MCDP. In 2001, Ethiopia's CSA reported that 15.5 million children (85.5%) were engaged in work. A report by ILO/SRO at Addis Ababa also showed that weaving was the largest employer of children (78%).

Workplace hazards are becoming a major public health issues but not well understood. There is big knowledge gap at the national and enterprise level about workplace hazards, accident, injury, illness and their costs.

The general objectives of the study were: to determine workplace hazardous of children in the informal sectors of traditional weaving, to examine the health, social and developmental impact, to investigate the complexity of child labor in the informal sector, and to evaluate the present national policies, regulations and law enforcements on child labor.

A cross-sectional descriptive study using quantitative and qualitative approaches was used. The study areas were Addis Ababa and SNNPR: Gulele sub-city, Wolayta Zone and GamoGofa zone and data were collected in 9 districts and 2 towns from 39 kebeles and 16 ketenas.

Some of the results identified were 54% believed weaving are not hazardous for children. But children strongly disagree in the FGD.

"Weaving is a very harmful job because you work by bending yourself like this [bending his posture], and when you work 'Diwora' like this [bending his posture] you will feel pain here [directing to the back]". [AA-FGDP3] and 40% believed children of 14-17 years should work more than 7 hours a day. As to the work place hazards: The average work space was 5.7m², as many as 13 weaver children work in a room, 10% children sleeping in their workplace, 36% rooms have poor ventilation system, 37% had no toilet while 52% had a toilet but unsanitary, 31% children inadequately dressed and 21% did not get adequate food. Physical, Chemical and Biological Hazards: 84% used sharp tools, 19% contact with chemicals, like dyes, 34% work with inadequate light, 63% exposed for excess cotton fibers, 82% dissatisfied with their workplace thermal condition and 49% felt too hot and 33% felt too cold. On ergonomic hazards: children sit for long hours but 89% did not have seat back rests, poor posture with bending and repetitive work, all the 5 tasks of weaving performed in a stressful condition of high work demand, according to QEC "Diwora" and "Shema" are the most risky tasks. High and very high exposure level values back, shoulder/arm, wrist/hand and neck. Psychosocial hazards: children lack free time to play, mistreated and frightened by employers, physical abuse: females were sexually harassed, no positive feedback, have no freedom even to cry and loneliness and insecurity

" In a very broken voice] ...I don't have any [friends]. [With a very broken voice] hmmm... Yes...very...very strongly. I wish I had a family and I need them. Since I lost my family, I am always traumatized. I feel helpless and hate everything". [AA-CSWCAI]

As to the work load 44% work on weekends and holidays, 16% work at night (10PM – 6AM), work long hours up to 16 hours a day and lack freedom to take a break. *"When I ask for rest, they say 'you can leave; I will not raise you'. So, if I want to get a break I will say I need to go out for pee ...If I completed what I started, I will sleep early if not there is no rest or sleep until 7 am [the next day]."* [AA-FGD2WCP6].

Work related injuries: one year injury prevalence was 121/1000 and one year illness prevalence was 261/1000.

Social and developmental effect: 30% of children have low self-esteem; children are traumatized and poorly socialized. Feeling of frustration and hopelessness and lack of confidence are common features of the young workers. They tend to be coward and they are even afraid to stand for their right and to express their feelings. The work is characterized by high risk of disability. There is lack of public awareness of the contents and applicability of the labor proclamation.

In his conclusion, Ato Yifoker pointed out that parents have poor attitude on child labor and relatives are involved in child trafficking to the urban centers and as a result many children below the legal working age were engaged in hazardous work. Poverty, lack of awareness, lack of access to education and false promises of brokers in the urban are major factors that exacerbate the child labor situation. High numbers of school dropouts are also engaged in hazardous working condition which is forbidden by the labor law.

Finally the researcher recommended the following:

- Occupational Health and Safety Improvement: Redesigning the working tools and work station and work place health and safety should be enhanced. Interventions should target the employees and working children, provide valuable information with self-used ICE materials to improve the health and safety of young workers. It is also important to provide training on the danger of hazardous and psycho-social rehabilitation for victimized children should be encouraged by CYWA.
- Set minimum workplace Hand & Safety standards for informal sectors, develop and implement a labor inspection package in the informal sector, ensure the availability of free schooling and feeding for needy and strengthen market linkages with the end user.
- Establish collaborative efforts at national & local level. Stakeholders and government should support multi-stakeholders initiatives and create a discussion platform and research institutes and universities should take part in providing evidences for better decision and technology transfer.

One comment made by a participant was: this is a world-wide problem but needs the attention and action of EPHA and children in labor should at least get education.

Presentation 34: “Effect of weather variability on the epidemiology of diarrheal diseases: A systematic literature review”, by Hunachew Beyene.

In the introduction it was explained that many studies have suggested that climate change has various negative effects on human health including infectious diseases. This can be as direct effect (increases in the frequency, intensity, and/or duration of extreme weather events, including heat waves, floods, droughts, windstorms, wildfires) and indirect health effects - result from changes in the geographic range, seasonality, and incidence of water-, food-, and vector-borne climate sensitive infectious diseases (i.e. salmonella, Lyme disease, and many others). Influences the epidemiology of zoonotic disease primarily by inducing changes in reservoir and vector dynamics resulting in increased risk of flooding and pollution more nutrients, pathogens, and toxins enter in to drinking water sources.

The objective of this study was to identify the climatic determinants of diarrheal disease by reviewing different studies. A literature search was conducted using the electronic databases Google Scholar, MEDLINE/PubMed, EMBASE and Hand search. The search was limited to journal articles published in English in peer reviewed Journals from January 2000 through 2012. Most of them are recent and the key words used were climate, temperature, diarrheal disease, weather variability, precipitation.

The results showed that 21 studies which were conducted in different countries throughout the world considered the relation between climate variability with diarrheal disease outcomes. These were Africa=4, Asia=7, Latin and North America=1; Latina America=1; North America=4, Oceania=4, WW=3 and Pacific islands =1. The variables indicated in the reviewed literature were temperature=18, precipitation/rainfall=12, relative Humidity=3, ENSO=3, river level=3, air pressure=1 and sunshine hour=1. Temperature was found to be the most important meteorological variable for the occurrence of diarrheal disease, positively associated with diarrheal disease incidents in most of the studies -18/21. Precipitation/rainfall was also the second important variable as it was associated with the diarrheal disease occurrence – 12/21. Relative Humidity (RH)-3/21, ENSO-3/21, River level-3/21 and Air pressure -1/21.

As conclusions the researcher pointed out that

1. In general, temperature, precipitation, humidity, sunshine hours, ENSO, and air pressure were considered as risk factors for the occurrence diarrheal disease.
2. Temperature and precipitation were most consistent to be the risk factors for the diseases.
3. Most models employed were able to predict the association of climate variables with diarrheal disease.

Finally, he recommended that for better understanding of the impact of climate change, extensive researches need to be conducted at local level which will contribute as local data for policy makers. The moderator commented that this study provides useful information on the epidemiology of diarrhoea which is a major PH problem.

Major topic: HIV/TB

Moderator: Dr. Lemessa Oljira

Presntation 35: “Rapid Diagnosis of Tuberculous Pleuritis and Lymphadenitis with Immunocytochemical Detection of *Mycobacterium tuberculosis* complex antigen, MPT64,” by Agerie Tadele.

As introduction the researcher said that Ethiopia ranks eighth among 22 high burden countries and EPTB have been increasing, 20-50% of all TB cases, TBLN the commonest presentations of EPTB, and TPE-the second most frequent EPTB manifestation. The two important factors for prevention are sighted as improved case detection and effective treatment. It was also identified that diagnosis of EPTB is challenging because of protean manifestation of the diseases, lack of adequate sample amounts or volumes, paucibacillary nature of the specimens, presence of inhibitors undermining performance of PCR, lack of efficient sample processing protocol, etc.

The objective of this study was to evaluate the diagnostic ability of ICC staining method in pleural effusions and lymph node aspirates. It was a cross sectional study conducted at Tikur Anbessa Specialized Hospital and United Vision Medical Service, Addis Ababa, Ethiopia from December 2011-June 2012. The sample size was 118 out of which Cases were 51 and the controls were 67. Cases: Clinical suspicion of TP and TBLN, lab confirmation of TB by ZN stain and/or LJ culture and/or cytology and/or IS1081-PCR and Controls: PE or lymphadenopathy ²⁰ to condition other than TB and no evidence of TB on ZN, LJ culture, cytology, PCR.

The results showed ICC has increased the case detection among TPE and TBLN. The difference in performance characteristics can be explained by type of primer used, EPTB sites and the increased TB case detection among cases is attributed by: the detection of fragment of bacilli and improved detection mechanism with indirect staining.

The conclusion and recommendation made were:

- ICC has increased detection of TB in cases with TBLN and TPE and the finding of ICC should be used with clinical diagnosis
- Further research should be conducted: ICC with monoclonal anti-MPT64 should be done and the method has to be evaluated on other extra pulmonary TB sites.

One question was raised from the audience: What is the positive predictive value of the ICC? The researcher responded that the Positive Predictive Value of ICC was about 87%. However, the audiences were concerned about the PPV and specificity of a test to be equally high.

It is recommended by the audience that authors need to revisit the data and check these to measures of validity. The moderator commented that the study was well prepared and conveyed key messages of the study and it would be possibly good if published in the future.

Presentation 36: “The Renal Function Test Profile of HIV Positive patients before and after initiation Of HAART, by Fissha Bonja Geleto, et. al.

As introduction he tried to show the findings from different researches as renal disease is becoming an increasingly prevalent entity in human immunodeficiency virus (HIV)–infected patients and problems with kidney function in these people-may be due to medications or HIV itself. Highly active antiretroviral therapy has resulted in a shift of health concern toward chronic morbidities including renal dysfunction and renal damage caused by antiretroviral drugs which can result in a variety of toxic drug effects presenting as acute

renal failure, tubular necrosis, kidney stones, or chronic renal disease. These days in Ethiopia, chronic disease increase dramatically because of high prevalence of HIV and increasing of HAART users and HIVAN is the most common causes in HIV positive persons.

The general objective of the study was to assess the renal function profile of HIV positive patients before and after initiation of HAART in St. Paulo's general specialized hospital and the specific objectives were to compare the renal function profile before and after initiation of HAART, to describe the prevalence of renal dysfunction, to assess the correlation of CD4⁺ count with renal profile (Creatinine and urea), to assess the trend of renal profile after initiation of HAART (1st, 2nd and 3rd visit) and to assess the correlation of the renal profile with drug type.

A retrospective study was conducted from Jan-Mar 2012 and the study population was HIV positive individuals who start HAART and who have two and three visit for renal function test during the study period.

The result showed that the presence of association between renal profiles abnormality and drug type was analyzed using linear regression. For almost all drugs there was no significant association ($p > 0.05$). But for those patients taking the drug TDF/3TC/NVP significant association was seen ($p = 0.033$) between the drug exposure and urea abnormal result in the second visit.

The presenter concluded that TDF containing drug regimens which dramatically improve CD4 T Lymphocytes count and show significant Azotemia over times. In addition to this, prerenal abnormality is more prevalent than renal abnormality in the study participants in all visits.

At the end of the presentation a question was raised: was the difference in abnormality of urea and Creatinine statistically significant? The researcher responded: yes, the p-values were considered to assess the statistically significant difference between the measurements.

Finally the audiences commented that the comparisons of abnormalities over the years seem not supported by statistical significance measure and the authors need to revisit his study.

Presentation 37: "Factors Affecting VCT Utilization among Students of Colleges of Health Science in SNNPR," by Wondimu Bekele and et.al.

In his introduction he showed some of the evidences from the 2007 Ministry of Health report which states that the adult prevalence of HIV infection in Ethiopia was estimated at 2.1%, where most of the burden occurring among the young age group.

Interventions of prevention focused on key areas such as counseling and testing as the entry point to treatment, prevention and comprehensive programs to prevent HIV/AIDS infection among infants, women and young people. All have the right to know their HIV status. VCT services provide a supportive venue for learning the essential health information with the major aims of promoting HIV prevention, helping to reduce stigma, providing entry point for support and helping parents to prevent transmission to a baby.

The general objective of this study was to identify the socio-demographic determinants of VCT service utilization with the specific objectives of assessing socio-demographic and other factors associated with VCT use, the awareness towards HIV/AIDS transmissions and to assess the awareness, attitude and practice towards VCT among health science college students of SNNPR.

The study methodology was a descriptive cross-sectional study based on a quantitative survey. The target population consists of those randomly selected students from two of the governmental health science colleges in the region (HCHS & HoCHS). By adding contingencies for non – response rate, the total sample size was 450. A Multi stage random sampling method was used in order to select the study participants.

The results: Sexual and reproductive characteristics: sex education: 252 (60.6%) have taken sexual contact experience (non married): 271 (79%), age at first sex: 252 (73.3%) at < 20 years, lifetime number of sexual partner: 180 (52.3%) had more than one partner and 164 (47.7%) had only one partner, and condom use: 185 (53.8%) users and 59 (46.2%) non users.

- Awareness about transmission of HIV/ AIDS: unsafe sexual contact: 403 (**96.9%**), blood contact: 349 (**83.9%**), mother to child transmission: 312 (**75%**), organ transplant: 137 (**32.9%**), insect bite: 8(**1.9%**), hand shaking and kissing: 8 (**1.9%**), eating together: 3 (**0.7%**) and using the same toilet: 2 (**0.5%**).
- Attitude towards VCT: Favorable attitude: 325 (78.1%), Unfavorable attitude: 91 (21.9%),
- VCT Service Utilization: ever use of VCT: 198 (47.6%).

In conclusion almost all students participated in the study were aware about the modes of transmission of HIV very well; in spite of the significant proportion of students with risky sexual behavior and adequate information on VCT service , VCT utilization is less beyond the expectation. Fear of stigma and discrimination, unavailability of the service in their surroundings, and inability to cope up positive result were the reasons raised that hindered the majority of students from utilizing the service; and educational level (year of study), marital status, lower risky sexual behavior, access for sex education & attitude towards VCT were found to be the socio-demographic determinants of VCT service utilization among students of the two colleges.

Based on the findings, the researcher recommended that youth friendly VCT services need to be established on regular bases in school/college campuses and implementing proper and informative sex education at grass root level incorporating such knowledge in the curriculum has a paramount importance in curbing the problem. It is important that the educational institutions take the initiative for the establishment and active participation of Anti-HIV/AIDS, RH and Gender clubs to promote VCT and minimize the transmission of HIV/ AIDS for all the vulnerable groups. IEC and BCC materials have to be employed for promotion of VCT Service utilization and to reduce stigma and discrimination.

The questions raised, comments and responses made were:

- Why did you analyze age at first sex as below 20 years, is it significance? Response: authors selected age <20 years arbitrarily. However, it was commented to select age of PH importance like <18 or <16 years.
- What type of sex education?
- Awareness from health science students is not appropriate.
- HIV testing is low among college students.
-

Finally the moderator commented that the study was well presented and responded to the questions raised. However, the issue of refocusing prevention issues especially among young people was repeatedly suggested by audiences to be included in the recommendation.

Presentation 38: Treatment outcomes and Determinants of HIV Patients on Anti-retroviral Treatment Program in Selected Health Facilities Of Kambata and Hadiya Zones, SNNPR, Ethiopia, by Wondimu Ayele et. al.

In his introductory remarks, the presenter said that adult HIV prevalence in Ethiopia was 1.5% (DHS, 2011), women (1.9%), men (1.0%), urban (4.2%) and rural (0.6%). HIV prevalence in SNNPR is 1.0% (DHS, 2011), a total of 51,013 people living with HIV/AIDS in the region. Out of these, 26,165 ever started and 19,067 were current on ART (*SNNPR, 2010/11*) and since 2005, the Ethiopian Government in collaboration with partners has been providing free antiretroviral drugs for eligible HIV/AIDS patients.

The aim of the study was to assess treatment outcomes and its determinants for HIV patients on ART in selected four health facilities from Kambata and Hadiya zones, SNNP Region, Ethiopia (from 2007- 2011).

The design was retrospective cohort study conducted on adult people living with HIV/AIDS who are enrolled for ART program in selected Health facilities of Kambata and Hadiya zones that were enrolled on ART from December 2007- December 2011. Six health facilities were eligible for this study. Eligible health facilities were stratified into hospitals and health centers in each study zone and then one hospital was included from each zone. A health center with high patients load was included from each zone. 730 Eligible

ART patients were included as study subjects. A structured data extraction form was adopted from ART intake and follow up forms of ART clinics.

The results showed that out of the total, 66% of patients had WHO clinical Stage III & IV; moreover, 69% of patients had CD4 counts ≤ 200 cells/mm³; the median age was 30 years with *IQR* [26 37]; median CD4 counts was 151 cells/mm³ with *IQR* of [78_ 224] and median weight of patients was 51.5 kg with *IQR* [46 57.2].

This study shows that CD4 count and weight were significantly increased after initiation of ART at five years survival time as compared with baseline. In this group of Cohort, 12.2 %, patients died, and most of deaths occurred within the first six months. Fear of stigma and discrimination, the addictive behavior of the patients, absence of tangible information on the enrolment of spouses, long distance travel to take medicines might discourage the patients to take the necessary follow up.

As a recommendation, health care service providers and stakeholders must focus on preventing patient attrition to help patients continue on their follow up. The high early mortality have practical implication by addressing the need to initiate ART early which would require early diagnosis of HIV and might be addressed with improved counseling and testing services at facilities with strong community education and mobilization.

Presentation 39: “Intension of Health Care Providers to Initiate Clients for Provider Initiated Counseling and Testing: The Case of Gedeo Zone, South Ethiopia. Application of Theory of Planned Behavior: An Effort in Prevention and Control of HIV/AIDS, “by Yohannes Addisu, et. al.

In the introduction part, the researcher cited some relevant findings from different researches on HIV/AIDS including missed opportunities for PICT service in medical settings to diagnose clients at health facilities which are still prevalent because of lack of clients' active seeking for HIV testing, refusal of testing offer & lack of active role of health care providers in initiating HIV testing. To lesson such problem, intention to perform PICT by HCP is a critical entry point to life-sustaining care for patients in all health-care settings.

The general objective of this study was to identify and describe predictors of health care providers intention for initiation of PICT service among clients attending outpatient departments in Gedeo Zone health facility, 2012. The specific objectives were to describe intension of health care providers to initiate clients attending outpatient departments, to identify the behavioral predictors of TPB that influence health care providers' intension to initiate clients and to identify external factors to the TPB which influence health care provider's intention in Gedeo Zone.

The study design was cross-sectional descriptive facility based study supplemented with qualitative methods. The study populations were all health care providers who were working at outpatient department in Gedeo Zone health facility during the study period and for the qualitative part purposively selected health care providers working at outpatient department as well as head of health facility were included.

The sample size was 347 health care providers who were working in Gedio Zone Health facility. While for qualitative study 11 health care provider and 4 facility heads were included for in-depth interview.

The result showed that most of health care providers profession were nurses 282 (75.1%) followed by 31 (8.2%) health officers and 18 (4.8%) were medical doctors. The mean health care provider intention to initiate PICT to client was 12.9 (range of possible score=3-15). From total participants 247 (71%) score above the mean value of intention while the remaining 100 (29 %.) score below the mean value. Accordingly the mean score to direct measures of TPB, 18 ± 1.6 for attitude (range of possible score=4-20), 15.25 ± 2.8 for subjective norm (range of possible score=4-20) and 13.32 ± 2 for perceived behavioral control. 4 (range of possible score=4-20). This implies that the majority of respondents had favorable attitude towards using PITC service. Respondents' educational status was indirect predictors that influence health care provider intention in this study. This result is consistent with in-depth interview with one nurse

39 years old male respondent who said “.....usually physician refers PICT case to nurse”. Finally, belief based attitude was added to the regression model resulted in an R^2 of 0.089 referring that belief based attitude had an additional 8.9% of health care provider intention to do PICT. This indicates that external variables explained 2.2% and potential direct predictors of behavioral intention; together explained 14.8% of health care provider intention, of which the highest share was due to belief based attitude, 8.9%.

The present study revealed that influence from significant other does not have pressure on health care provider to do or not to do PICT at OPD. This is because almost all health care providers have motive to do PICT to their client regardless of any external influence.

Predicting health care provider intention to do PICT from indirect measures of TPB variables is consistent with in-depth interviews informants of one Female 29 year old from health facility who said that “Observing 2-3 HIV positive individuals per day through PICT motivates HCP to provide PICT service”.

Finally weighted control belief were regress with intention, out of that weighted control belief that were independently contributed to prediction of intention were; “Telling positive result is difficult (beta=-.133)”, and “Being busy in OPD affects PICT work (beta=-.241)”. This result is consistent with in-depth interview of the study in which *one female nurse said “...our client comes to treat for other health problem not to seek for HIV/AIDs test, thus they are not psychologically ready to accept positive result of the test and as a result health care providers face a challenge to disclose the result to client”*

It was concluded that for theory drive interventions, it must focus attention on how to select the important factors we can influence from among many factors associated with behavior. Health care provider of Gedio Zone has a high intention to provide PICT service to client attending OPD and thus by targeting and working on beliefs identified we can actualize desired behavioral change in health care provider.

Hence, the researchers’ recommendation was HIV/AIDs testing in Ethiopia at health care facility is determined by HCP attitude thus those concerned body should work on attitude of HCP towards HIV testing and HCP with higher educational status should emphasize on doing HIV testing.

A question raised to the presenter: what does educational status mean to the health care providers? Response: it was to refer the level of training of health professionals like two or three or more years of training. However, participants commented that it would have been analyzed base on professional category rather than educational status.

Presentation 40: Hematological and Immunological parameters among HIV positive patients taking HAART and HAART naïve in the ART clinic of Gondar University Hospital: a comparative cross-sectional study, by Bamlaku Enawgaw, et. al.

In the introduction part it was stated that hematological abnormalities are common complications of HIV. These abnormalities increase as the disease advances. In both antiretroviral-treated and untreated individuals, different types of hematological abnormalities are common Anemia (ranges from 1.3% to 95%), Leucopenia (Neutropenia is the most common leucopenia (10-30% of HIV patients with advanced disease), and Thrombocytopenia (3-40%).

The general objective of this study was to assess hematological parameters in HIV positive treatment naïve and those on HAART in ART clinic of University of Gondar Hospital and the specific objectives were to determine Hematological parameters in HIV positive treatment naïve patients and Hematological parameters in HIV positive individuals who are on HAART and to compare hematological parameters of HIV positive who are on HAART and treatment naïve individuals.

The study design was cross-sectional comparative study, the source populations were all HIV positive individuals and the study populations were adult HIV positive treatment naïve individuals and those on HAART for at least 6 weeks. The sample size was 145 for each group (calculated using Epi Info version 3.5.3 statistical software).

The study population was separated into two groups: Group 1 HIV sero-positive treatment naïve subjects and Group 2 HIV sero-positive subjects who are on HAART for a period 6 weeks or more. Study subjects were selected in systematic random sampling technique.

The results of hematological and immunological parameters showed that

- The mean WBC, Hgb, RBC, PLT and CD4 were $5.2 \pm 1.9 \times 10^3/\mu\text{l}$, $14 \pm 1.6\text{g/dl}$, $4 \pm 0.6 \times 10^6/\mu\text{l}$, 258.6 ± 82.9 and 415.4 ± 218.8 cells respectively in patients on HAART and
- $6.3 \pm 2.3 \times 10^3/\mu\text{l}$, $13 \pm 2.1\text{g/dl}$, $4.7 \pm 0.8 \times 10^6/\mu\text{l}$, 253.1 ± 95.2 and 361.1 ± 224.4 cells respectively for HAART naïve patients.
- WBC, ANC, RBC and MPV count was statistically higher in HAART naïve patients,
- Hgb, MCV, MCH, MCHC, MPV and CD4 count were higher in patients who were on HAART.

Hematological abnormalities were

- Out of the total number of study participants: 20.7% had anemia (43.3% had normocytic-normochromic anemia), 26.2% had leucopenia, 6.6% had thrombocytopenia and 0.7% had pancytopenia.
- According to WHO classification from anemic subjects: 16.7% had moderate anemia (Hgb = 7-10g/dl) and 83.3% had mild anemia (Hgb = 10-12g/dl).
- The prevalence of anemia in patients who are on HAART was 11.7% (58.8% had macrocytic normochromic anemia) while in HAART naïve patients it was 29.7% (48.8% had normocytic-normochromic anemia).

Patients on HAART showed statistical significant low leukocyte and neutrophil count than their counterparts ($P < 0.01$).

Anemia, leucopenia and thrombocytopenia were increased when CD4 count was $<200\text{cells}/\mu\text{l}$ ($P < 0.05$).

In conclusion the prevalence of anemia was high in HAART naïve patients while leucopenia and neutropenia prevalence was higher in patients on HAART. Anemia, leucopenia, thrombocytopenia and lymphopenia were increased as CD4 count decreases.

Based on the present findings, HIV patients are recommended to check up their CD4 counts regularly and start HAART when it is appropriate in order to decrease the prevalence of anemia.

Major topic: Mental and non-communicable Disease

Moderator: Dr. Tedila W/Geworgis

Presentation 41: “Depression in Ethiopia: conceptualization, burden, and the challenges of patient care,” by Fentie Ambaw

According to the presenter, depression is a syndrome characterized by core symptoms of sadness, loss of interest in activities, and decreased energy along with other emotional and somatic manifestations”(WHO, 2001b).

The objective of this paper is to examine to which of the models defining health the conceptualization of health/mental health/depression of Ethiopians best fits and to summarize the lessons learnt over the past 40 years in Ethiopia about: the burden of depression, the challenges in the care of patients with depression and to describe the overall implication of the knowledge gained so far for policy, research and practice.

PUBMED and GOOGLSCHOLAR were searched using search terms that included, ‘depression AND Ethiopia’, ‘mental illness AND Ethiopia’, ‘depressive* AND Ethiopia’, ‘perception of mental illness AND Ethiopia’, ‘treatment mental illness AND Ethiopia’, and ‘perceived cause of mental illness AND Ethiopia’, ‘comorbid depression’, ‘defining health’, ‘spirituality and health’, ‘religion and health’, ‘culture and depression’, ‘burden of depression’, and “depressive*” from February –May 2013. Ethiopian Medical Journal, Ethiopian Journal of Health Development, and Ethiopian Journal of Health Sciences were browsed directly for contents on mental health. Recent documents of the World Health Organization and the Federal

Ministry of Health were browsed for global and national concerns on depression. An attempt was also made to include all works that studied depression either as a primary objective or as a factor. However, studies that have measured depression as a single item variable, and unpublished studies were not included.

Results: A total of 86 published works were reviewed out of which 79 were original articles from reputable journals, 3 were WHO formal documents and 3 were formal policy documents of the Federal Ministry of Health of Ethiopia. It seems quite evident that the Ethiopians' conceptualization of health best fits to the wellness model of health where body, mind, and spirit are integrated. Evidences show that depression is common in Ethiopia among a wide range of population groups. It is also highly associated with other priority problems of low income country such as tuberculosis, HIV, poverty, and other chronic non-communicable diseases.

Conclusion: Depression appears to be a devastating and solution-urging disorder in Ethiopia. Because Ethiopians' conceptualization of health fits to the wellness model, no single system of care can promote the health of Ethiopians. This requires the Government to strengthen the different systems of care. How the different systems of care should be integrated needs to be studied.

Presentation 44: "Survival and associated factors among cervical cancer patients in Black Lion Hospital, Addis Ababa, Ethiopia, 2008-2012, a retrospective longitudinal study, by Tigist Yesuf, and et. Al.

Quoting GLOBOCAN 2008, the researcher pointed out that cervical cancer is the second most common cancers among women worldwide, with an estimated 529,409 new cases and 274,883 deaths in 2008. The crude incidence and mortality rate in sub-Saharan African countries is 24.4% and 22.9% respectively while in Ethiopia it is 18.8 and 14% respectively. In Ethiopia, each year an estimated 7619 women are diagnosed with cervical cancer and 6081 die from the disease. The disease ranks as the 2nd most frequent cancer among women in our country.

The general objective of this study is to assess a five year survival time and its determinants among cervical cancer patients in Black Lion Hospital, Addis Ababa, Ethiopia, 2008-2012. The specific objectives are to estimate the time to death of cervical cancer patients, to compare the survival time among the different groups of cervical cancer patients and to identify predictors of survival time in cervical cancer patients.

The study design is a health facility based, retrospective longitudinal and study area is Black Lion Hospital, Addis Ababa. The study population is all charts of cervical cancer patients, diagnosed in between 2008-2012 at Black Lion Hospital were retrieved from local cancer registries and followed retrospectively for the study of five year survival. Data was collected from January to March 2013.

Kaplan Meier survival curve together with log rank test was fitted to test for the presence of difference in survival among predictor variables. Cox regression was fitted to find out predictors of survival time. Backward Stepwise Multiple Cox regression was fitted at 5% level of significance to determine the net effect of each explanatory variable on time to death after diagnosis of cervical cancer.

The results were that overall survival was 20% at five years and 34% at three years. It is found that there is a difference in survival experience between categories of stage of cervical cancer, treatment modalities, age of patients and place of residence. Being in stage IV cancer AHR 2.949 (95%CI 1.303, 6.791), being operated AHR 0.488 (95% CI 0.281, 0.848) and receiving adjuvant Chemotherapy AHR 2.731 (95%CI 3.534, 21.337) were predictors of survival time among cervical cancer patients.

Conclusions: Overall survival after five years was 20% and there were differences in survival experience among stages of cervical cancer, treatment modalities, age group of patients, and between categories of place of residence. Stages of cervical cancer, being treated with surgery and adjuvant chemotherapy were predictor variables of survival time. This study shows the key role of early detection and timely treatment of cervical cancer for reducing mortality from cervical cancer.

Recommendations: comprehensive cervical cancer control including cervical cancer screening programs is important. Adequate investments in improving awareness, cervical cancer health-services infrastructure, and accessibility and creating awareness in collaboration with public media about cervical cancer prevention, screening and treatment are equally important. Furthermore, early detection and prompting treatment using feasible yet effective regimens, health-services infrastructure, human-resources development, and referral pathways are also recommended.

Major topic: Lab based studies

Moderator: Dr. Ameha Kebede

Presentation47: *IN VIVO* ANTI-PLASMODIAL ACTIVITIES OF *ECHNOPS KEBERICHO MESFIN* AND *ZINGIBER OFFICINALE* AGAINST *PLASMODIUM BERGHEI* IN MICE MODEL, by ABDISSA BIRUKSEW HORDOFA, and et. Al.

In his introduction, the presenter said that malaria is a disease caused by five protozoan parasites; of which *P. knowlesi* is newly discovered. The disease is a major public health threat and 863,000 deaths happen annually. Most of these deaths are caused by *Plasmodium falciparum* and 89% of the mortality is in sub-Saharan Africa and it kills a child every “minute”. In Ethiopia, it is the leading communicable disease and 70,000 deaths occur each year.

The general objective of this paper is to evaluate *in vivo* anti- plasmodial activities of *Echinops kebericho Mesfin* & *Zingiber officinale* against *plasmodium berghei* in mice model. The specific objectives are to assess the oral acute toxicity effects of *E.kebericho Mesfin* extract in adult Swiss albino mice and to assess the *in vivo* anti- plasmodial activities of the extracts of both plants against *plasmodium berghei* in adult Swiss albino mice.

The design is experimental study and 70% ethanol crude root extracts were obtained from both *Echnops kebericho Mesfin* and *Zingibir officinale* Roscoe. Oral acute toxicity test for *Echnops kebericho Mesfin* was determined in mice by single administration of the crude extract. The *in vivo* assays were done by administering mice infected with *Plasmodium berghei* for four consecutive daily doses of the extracts though the intra-gastric route following Peters'4-Days suppressive test.

Results: The acute toxicity study showed no significant toxic effects of the extract of *Echnops kebericho Mesfin* on the organs of animals up to the dose level 5000mg/kg. It was observed that *Echnops kebericho Mesfin* (1000mg/kg/day) showed the highest anti-plasmodial activity and suppressed parasitaemia by 49.53% and 34.66% at dose 500mg/kg/day. *Zingibir officinale* Roscoe (1000mg/kg/day) suppressed parasitaemia by 32.83%.

Conclusions and Recommendations: Acute oral toxicity studies showed that the safety of the ethanolic crude root extract of *E.kebericho Mesfin* with minimum sign of toxicity at higher dose (5000mg/kg). The ethanolic crude root extracts of *EKM* and *ZOR* possess antimalarial activity in a dose dependent manner. The antiplasmodial activities of these plant extracts support: the ethno-botanical studies and reason for the use of the plant by the traditional medical practitioner in Ethiopia. *EKM* & *ZOR* are promising medicinal plants for the future anti-malarial drug development

This study provides the report of acute oral toxicity studies of *EKM* and antiplasmodial activities of both plants for the first time. The active compounds of the plant extracts need to be: purified by bioassay- guided isolation method and that further work must be undertaken to isolate the active compounds responsible for anti-plasmodial activity. Moreover, Molecular elucidations of the active compounds should be done and that *In-vitro* assay for *P. falciparum* should be carried out.

Presentation 48: “Phased approach for laboratory information system implementation and expansion in Ethiopia, successes and challenges”, by Adino Desale, and et. Al.

In his introduction, the researcher defined LIS as a class of software that receives, processes, and stores information generated by medical laboratory processes and it is a highly configurable application

customized to facilitate a wide variety of laboratory workflow models. LIS provides key features such as workflow and data tracking support, flexible architecture, and smart data exchange interfaces. The presenter went on to say that the program was initiated by EHNRI and CDC-Ethiopia in 2006. Polytech LIS Software from Comp ProMed, CA, has been chosen as a standard Laboratory Information System for use in Ethiopia. It can be interfaced to all of the state-of-the-art analytical systems in clinical laboratory sciences.

The objective of the study was to establish and strengthen electronic laboratory information system in phased approach in different regions of Ethiopia and to evaluate the success and challenge of the program. Ethiopian Health and Nutrition Research Institute conducts baseline assessment by structured questionnaire to pilot the first LIS implementation. Sites were selected based on their patient load, availability of functional information technology unit and availability of enough laboratory analyzers to interface with the LIS. A plan was developed to implement an expansion until 2014 in four phases. First phase (2007/2008): piloting LIS expansion at four facilities at EHNRI, AARL, Black lion, and Zewditu Memorial hospital. Second phase (2010/2011): Implementation deployed at six facilities (Alert Hospital, Adama Hospital, Gondar Hospital, Mekelle Hospital, St Paul Hospital and Bella Hospital). Third phase (2012)-It was implemented at five facilities (Federal Police Hospital, Nekemte Hospital, Hawassa Hospital, Adama RL and Bahir Dar RL.) and the fourth phase (2013) implementation was deployed at four facilities (St. Peter TB HL, Hayder HL, Dill Chora HL and Hiwot Fana HL). LIS support Registry logbook, report and questionnaire was used to assess the success and challenge.

Results: LIS is implemented at nineteen facilities till September 2013 in Ethiopia and 17 are working successfully with the software. Advantages: improves data Management system, quick and easy access of patient data and eliminates data loss and redundancy problems. What is more it makes easy capturing, storage and retrieval of laboratory data, reduces clerical errors in result reporting, minimizes Turn Around Times and enables easy application of unique identifier for each patient.

Conclusion: Laboratory information system brings substantial improvement in the laboratory data management system and facility managers should be aware of the potential benefits of LIS to institutionalize the program.

Presentation 49: “Prevalence and antimicrobial susceptibility pattern of *Salmonella typhi* and *Salmonella paratyphi* isolates from patients with clinical symptom compatible with typhoid fever,” by Gizachew Andualem and et. Al.

The presenter started his discussion by showing many research findings in the area. He said that in Ethiopia, precise estimates of the prevalence of typhoid fever among febrile patients are unavailable and there is no coordinated epidemiological surveillance. Typhoid fever caused by such MDR strains of *Salmonella enterica* serotype Typhi presents a serious problem in many developing countries.

The main objective of this study is to determine the prevalence of *Salmonella typhi* and *Salmonella paratyphi* in febrile patients with clinical symptom compatible with typhoid fever and to determine the antimicrobial susceptibility pattern of the isolate in St Paul's General Specialized Hospital.

A Cross sectional descriptive type of study was conducted from December 2010 to March 2011. Over a period of three and half months about 270 febrile patients whose clinical symptoms are similar with typhoid fever and who visited the laboratory for Widal test were recruited for this study. Blood sample collection and inoculation, isolation and identification of salmonella, Antimicrobial Susceptibility and quality control were done based on standards.

The results were of the total blood cultures *S. typhi* is isolated only from seven (2.6 %) of the patients, while *S. paratyphi* were identified from 4 (1.5 %) of patients and 51 (18.9%) patient's blood cultures gave positive results of bacteria other than salmonella species all cases are found from age 15-59. There is no typhoid fever infection in young children and older (fewer than 14 and above 60 years) of age groups of patients in this study.

Antimicrobial sensitivity pattern of *S. Typhi* and *S. Paratyphi* showed that the resistance pattern of *salmonella typhi* and *S.paratyphi* was determined against nine drugs. Most (3/7[42.9%]) of the isolated *S. typhi* were highly resistant to amoxicillin. There was no species which show resistance against norfloxacin and ciprofloxacin. All species were sensitive for norfloxacin and ciprofloxacin and 85.57 % were sensitive for gentamycin and trimethoprom-sulphometoxazole and 28.6% of isolates have intermediate effect for tetracycline and ceftriaxone.

Salmonella paratyphi isolates showed no resistance to gentamycine, tetracycline, norfloxacin and ciprofloxacin. More resistance (3 out of 4) was observed in amoxicillin than other drugs and intermediate drug resistant pattern was not observed in *Salmonella paratyphi* species. Among the isolated *Salmonella typhi* species, only one specie was resistant for more than 3 types of drugs while 2/4 of *salmonella paratyphi* were resistant to more than 3 drugs. Multiple drug resistance (MDR) were observed in these three species and the MDR isolate of *S. typhi* was resistant to ampicillin, amoxicillin, cotrimoxazole and chloramphenicol. The two MDR species of *Salmonella paratyphi* were resistant to ampicillin, amoxicillin, cotrimoxazole and ceftriaxone.

Hence, the study found out that the prevalence of *S.typhi* and *S.paratyphi* in this study is 4.1 % with *S. typhi* (2.6%) and *S. paratyphi* (1.5%). In this study the in vitro antibiotic sensitivity of *S.typhi* isolates to ciprofloxacin and norfloxacin were highly sensitive and high level of resistance of *S.typhi* (42.9%) to amoxicillin was found. Overall, the current study indicated that there is a high level of resistance development in *S. typhi* and *S.paratyphi*. The emergence and continuous development of resistance may be due to improper use of antibiotics.

Conclusion: the prevalence of *S.typhi* and *S.paratyphi* among febrile patients in this study is about 4.1% which indicates that it is still public health concern. But it is not as high prevalent as diagnosed by Widal test and feared by the people.

Based on the above findings, it was recommended that appropriate antibiotic indicated by sensitivity test should be employed to prevent development of resistance and the indiscriminate use of drugs in treatment of febrile illness should be avoided.

Major topic: Child Health

Moderator: Ato Fassil Tesema

Presentation 52: “New Vaccine Introduction: Analysis of the National Decision Making Process in Ethiopia, by Mitike Molla, et. al.

Ethiopia introduced two new vaccines: *Haemophilus influenzae* type b (Hib) and Human papillomavirus (HPV) in 2007 since the advent of the EPI program in 1980 free of charge. In 2010, PCV 10, a conjugate vaccine was introduced into the EPI. This study assessed how the decision making process was as part of a seven middle and low income country study-Bangladesh, Cameroon, Ethiopia, Guatemala, Kenya, Mali and South Africa.

A qualitative study design was employed among 15 informants from February-March 2011 in AA by national researchers and LSHTM team members. The interview topic guide was prepared by the LSHTM which focused on status of EPI, questions regarding how the vaccine was introduced, who was involved?, what the drivers were, (Disease burden, funding, political priority), programmatic considerations, acceptability equity and access, and financial considerations, and vaccine availability. Framework analysis was used to analyse the data after coding it using Open Code 4.1 in a predetermined theme.

The results were:

- Decision making process: Status of EPI: EPI in Ethiopia is described as one of the strongest programs run by MoH and a lot of focus is given currently to the program to achieve the MDGs.

- Only few actors were involved in the process: The FMOH especially the Minister (who was previously a GAVI board member) played a significant role. Likewise, WHO also played a major role in the application process.
- The cue to action preceded the GAVI invitation for new vaccine introduction: Scientific publications, international and national meetings, neighboring countries' actions.

Impact of Vaccination

- The potential positive impact of the new vaccine on child mortality was the envisaged advantage in Ethiopia.
- There seems an overlap between meeting the MDG4 goal which is mostly a political consideration to the direct aim in decreasing mortality.
- The impact on other health services and programs was not visible from this study.

The conclusion made were availability of GAVI funding was an opportunity and driver for new vaccine adoption, the main driver was politically driven, sustaining the immunization program is a concern as more new vaccine is introduced vis-a-vis the cost sharing by the government. The GAVI application procedure was time consuming but well tolerated by the ICC which has later facilitated the subsequent application.

Presentation 53: “Factors influencing complete immunization coverage among children 12 – 23 months of age and its implication for child survival in Ethiopia”, by Yihune Lakew, et. al.

Full immunization coverage in Ethiopia remains low among children aged 12 – 23 months and the determinant factors for low immunization services use are poorly understood, and hence, the need for this study.

The survey was cross-sectional and multistage cluster sampling of the most recent EDHS of 2011. A total of 1927 children in 12-23 months of age were extracted from kids' database for this analysis. Mothers self reported and observations of vaccination cards were used to determine vaccine coverage and to identify possible independent predictors.

The result showed that the prevalence of fully immunized children was 24.3% with specific antigen coverage from 36.5%, 44.3%, 55.7%, and to 66.3% of DPT, Polio, Measles and BCG respectively. ANC attendance, institutional delivery, women's information on conversation program and women in rich group had positive effect for full vaccination coverage. Muslim followers and educated partners had a reduction effect for full vaccination coverage in the country.

It was concluded that maternal health service use including ANC and institutional delivery, awareness on community conversation programs showed protective effect. Finally, the researchers recommended that focus has to be given to remote rural areas, educated families, husbands and Muslim communities in particular. Further efforts are needed to enhance the usage of maternal health services to scale up immunization coverage in the country.

The questions raised were: father's education status has a negative impact to the completion of immunization, why? Have you stratified the data by religion? The presenter responded that he has no exact answer for these questions and rather would think of further analysis.

Presentation 54: “Determinants of pneumonia in age two months to five years in urban areas of Oromia Zone, Amhara Region, Ethiopia”, by Abel Fekadu, et.al.

In the introduction section of the paper, the researcher has shown the results from different literatures. To mention some: pneumonia is a top cause of mortality amongst children under the age of five years globally, half of the world's deaths due to pneumonia in children under the age of five years occur in Africa. In sub-Saharan Africa, the anticipated proportion of deaths in children aged below 5 years ascribed to pneumonia is 17. Ethiopia is the fourth of 15 countries having the highest mortality of under five clinical pneumonia

(84.6 death per 10,000 under five populations) in the world and Amhara regional state is one of the most affected regions in Ethiopia contributing around 29.4% of under five ARI sensibly pneumonia. The case definitions are severe pneumonia- have symptom of cough, fast breath and chest in drawing.

The objective of this study was to identify risk factors for pneumonia in age two months to five years in urban areas of Oromia Zone, Amhara region.

Institutional based unmatched case control study was employed from March 23 to April 23, 2013. The source and study populations were all children of age 2 months to 5 years found in the area and available in the health institution during the data collection period respectively. The case sample of 122 and control sample of 244 were used. Data collection methods were face to face interview and observation of family folder. Anthropometric measurement of height (cm) and weight (Kg) was taken and nutritional status of the child determined using Emergency Nutrition Assessment [ENA] for SMART 2011 software.

The results showed that 59 (48.7%) cases and 95 (40.4%) controls – stunted; 24 (19.8%) cases and 29 (12.3%) controls – underweight; 28.9 % of cases and 10.6% of controls had a history of diarrhea and bulk of cases 97 (80%) and controls 200 (85%) had got one to full dose of pneumococcal conjugate vaccine. Environmental related characteristics of respondents showed that about 71 (58.7%) of cases and more than half of controls 179 (76%) were living in house roof made of corrugated iron sheet, nearly half of both cases and controls were living in crowded conditions, nearly all of cases and controls household uses solid type of cooking fuel and about 82 (67.7%) of sick child and 184 (78.3%) of well children's were not carried on the back of their care giver during cooking. A child in the age group of 2-11 months and 12-23 months were 85% and 62% less likely to develop pneumonia as compared to children in age 35-60 months respectively. Likewise, a child born from a father who completed primary school (1-4) and (5-8) were 10.7 and 4.6 times more likely to develop pneumonia as compared to babies born from father of higher education. A child who had cared by other family members like house servant were 2.8 times at higher risk of developing pneumonia compared to children cared by their mothers. In this study a child who had a history of diarrhea was 3 times more likely to develop pneumonia.

The conclusions were a child carried by home maid, had diarrhea history and household history of acute lower respiratory infection were strongly associated with increased risk of childhood pneumonia.

Based on the findings, the researchers recommended:

- The woreda health offices to strengthen diarrhea prevention activities, prevention of acute lower respiratory infections and advocate the effect of child caring practice in prevention of childhood pneumonia.
- Health extensions workers to mobilize the community to create awareness on diarrhea prevention and control activities as well as on the roll of child caring in prevention of pneumonia
- Parents to strictly observe and give care for their kids.

The questions raised and the responses given were:

- PCV vaccination was not significant but age was. Why do you think this is the case? The response was: PCV started early and it was initiated in the area lately and interactions were checked but not significant.
- Why the family history on ARI had relation with pneumonia? It may be due to illness with other members that may expose the index kid.

Presentation 56: “Determinants of delay in malaria treatment seeking for under-five children in south-west Ethiopia: a case control study”, by Alemayehu Getahun.

As a background the researcher said that malaria kills in a rapid way due to *P. falciparum*. It kills over one million persons each year, 90% in Africa and the majorities are children. Malaria contributes up to 20% of under-five deaths in Africa and a child dies from malaria every 30 seconds in the world.

The general objective of this study was to assess determinants of delay in malaria treatment seeking behavior for under five children in Omo Nada, Tiro Afeta, and Sokoru woredas, Jimma zone, Southwest Ethiopia. The specific objectives are to identify socio-demographic, knowledge of mothers/caretakers and health system factors associated with delay in malaria treatment seeking behavior for under five children in the study areas.

The study design was unmatched case control; the source populations were all under five children who were positive for plasmodium species in the study health centers. The study populations were:

- **Cases:** all under five children who had fever and any other signs/symptoms of malaria and positive for plasmodium species and sought for treatment after 24 hours of developing sign and symptoms at health center.
- **Controls:** all under five children who had one or more of signs/symptoms of malaria and positive for Plasmodium and sought for treatment within 24 hours of developing sign and symptoms at health center.

The sample size was 310 under-five children (155 cases and 155 controls). In-depth interview was conducted with OPD workers and FGD with conveniently selected mothers of study participants.

The results in relation to health facility and caretaker's/mother's related factors showed that 152 (98.1%) of cases and 151 (97.4%) of controls rated approach of health personnel as moderate, 17 (11.0%) mothers/caretakers of cases and 47 (30.3%) mothers/caretakers of controls encountered child death. All of the respondents responded three and above knowledge questions out of five questions. FGD results showed that all discussants know what malaria is except few.

One interviewee from Sokoru Health Centre was quoted as saying: *"I think the majority of our community knows more about his health, because they get information from many sources like mass media, health extension workers, community health agents and the like; the problem is on practice."*

In conclusion the study shows significant association with five variables i.e. independent predictors of outcome variable were type of marriage, complain of side effects of drugs, cost of transportation, distance of health institution from residence, and history of child death.

Finally, the researcher made recommendations for FMOH and Administrative bodies to strengthen capacity building on increasing health facility coverage and service utilization of the community, specifically for under five children. It was recommended for Health Care Providers to give health education to the community on time of treatment seeking in respect of national guideline and WHO standards, to strengthen preventive health strategies, to explain the benefit and possible side effects of drugs during drug administration. Researchers were advised to further study with longitudinal study design to clearly show relative risk.

At the end of the presentation a question was asked: how to identify with crude ratio? The researcher responded that they had done adjusted analysis.

Presentation 57: "The effect of HEP and other accessibility factors on care-seeking behaviors for common childhood illness in rural Ethiopia," by Addis Ashenafie, et.al.

As a background it was stated that since 2011, the HEWs of Ethiopia's HEP started providing pneumonia case management for children under-five years of age as part of its basic services package through the ICCM strategy. The researcher reported the effect of HEP and other accessibility factors on care-seeking behaviors for common childhood illness such as: ARI, diarrhea and fever.

The method utilized was three possible care-seeking outcomes were considered: not seeking appropriate care, seeking care from HEP sources, and seeking care from other appropriate sources. The baseline care-seeking outcomes in EDHS, January – May 2011 were compared with the care-seeking outcomes in a follow up ICCM survey in December 2012.

The findings were appropriate care-seeking for children with ARI, diarrhea or fever increased two fold from 19% at baseline to 38% at follow up. The improvement was mainly due to increase in seeking care for common childhood illnesses from HEP sources.

Finally, it is concluded that incorporating ICCM within HEP service package significantly improved the appropriate care-seeking behaviors for childhood illnesses in rural Ethiopia.

Major topic: HIV/AIDS

Moderator: Dr. Yebeltal Assefa moderated the presentations .

Presentation 59: Determinants of multi drug resistant tuberculosis in patients who had taken first line anti tuberculosis treatment in Addis Ababa: A case control study, by Selamawit Hirpa and et.Al.

In her introduction the researcher defined and explained Multidrug Resistant TB (MDR-TB) as a form of TB infection that does not respond to Isonized (INH) and Rifampacin (R) (WHO, 2012). Worldwide, the estimated prevalence of MDR-TB in 2010 was 650,000 cases (WHO, 2011f). The principal patient related factor that predicts the occurrence of MDR- TB is drug non adherence (FMOH, 2011).

The general objective of this study was to asses factors that determine the occurrence MDR-TB in patients who had taken first line anti-TB treatment in Addis Ababa City with specific objectives of finding out if non-adherence to the first line anti-TB treatment is risk factor for developing MDR-TB, evaluating if HIV infection is risk to develop MDR-TB in patients who had taken first line anti TB treatment and to determine if individuals who are treated with anti TB Category II regimen have more risk for developing MDR-TB.

Cases were MDR-TB patients all who had taken first line anti TB drugs in Addis Ababa and had a history of taking first line anti TB drugs for more than a month. Controls were individuals who had taken first line anti TB drugs in Addis Ababa; registered as cured or treatment completed and didn't have any clinical symptom for TB during the study period which was checked by a TB screening tool.

The sample size is 288 subjects i.e. 144 cases and 144 controls.

The results showed that 105 out of 134 individuals in the case group and 15 out of 134 in control group had two or more TB episode. Seventy nine point nine percent of MDR-TB cases and 9.7% of controls were treated at least two times with first line anti TB treatment. From these individuals 94.4 % of MDR-TB cases and 23.1% of controls were treated with category II regimen.

In conclusion, non adherence for first line anti TB treatment was significantly associated with MDR-TB; Individuals who were treated with Category II regimen had increased probability for MDR-TB disease and HIV had no significant association with MDR-TB in patients who had taken first line anti-TB treatment. So they recommend that health professionals ought to enhance their effort in treating patients, increasing the country's laboratory capacity for drug sensitivity test as much as possible, increasing public awareness about MDR-TB and the effectiveness of Category II regimen in treating TB patients needs further study.

A question was raised on the prevalence of HIV among the study participants and the researcher responded that it is low anyways, it will be checked.

Presentation 60: Partnership Defined Quality (PDQ) for improved HIV and STI clinical services for MARPS: USAID Transaction Project, Ethiopia, by Yunis Musema and et. Al.

TransACTION's Addis Mela Health Facility Network integrates syndromic management of STIs and HIV Testing and Counseling (HTC) for Most At Risk Populations (MARPs) in Ethiopia, such as Female Commercial Sex Workers (FCSWs), people living with HIV, track drivers and daily laborers, throughout 120 targeted towns. TransACTION adopted the PDQ methodology to measure and improves the quality of clinical service delivery and client satisfaction from the perspective of both beneficiaries and service providers. PDQ involved town level teams that led separate quality exploration discussions among the different MARPs groups and health service providers in selected implementation towns followed by a

'Bridging the Gap' session, bringing the beneficiaries and service providers together to share perspectives of service quality. Quality Improvement Committees (QICs) were then formed comprised of service providers, beneficiaries, TransACTION program staff and town HIV/AIDS Committee (HAC) representatives who meet monthly to discuss quality issues.

Lesson Learnt: the PDQ approach gave beneficiaries, service providers and local stakeholders a forum to voice their issues regarding clinical quality. This was further sustained by the creation of QICs in each town which became a network of for quality assurance, offering recommendations to the health facilities to improve user friendliness and access. Regular monthly QIC meetings led to greater collaboration between service providers and clients and continued to improved uptake of HTC (from 19% to 92% in one year for all MARP groups) and STI services (from 32% to 56% in FCSWs). Assessment done before and one year after the exercise showed that there is a statistically significant improvement by service providers in giving satisfactory responses to client concerns and in encouraging partner testing (43% increment). Clients reported improvement in terms of privacy, shorter waiting time, flexible working hours, better understanding and acceptance of syndromic management of STIs by both service providers and clients themselves.

Next steps: the PDQ experience clearly demonstrated the benefit of directly involving target groups in assessing problem areas in health care service delivery, and the value of their continued participation in designing and implementing solutions to ensure service quality. The PDQ approach also contributed to the overall strategy of building the capacity of the community structure.

A question was raised on sustainability of the program. The presenter responded that the program was initiated by the committee which may try to sustain the program. In addition, a lot of commitment from the local authorities observed and this will maintain and the committees also mobilize resources for funding the program.

Presentation 61: Changing Demographic and Information Needs among callers to an AIDS Telephone Hotline, 2004-2011, by Gashaw Mengistu and et.al.

The presenter started his discussion by giving background information about *Wegen* AIDS Talkline (952) which he said was established in 2004 with the purpose of providing accurate information on HIV, counseling and referral services nationally. The services provided in 13 languages and currently 58 staffs with health, psychology, sociology and social work backgrounds.

Routine data like call type, topic, callers, demographics, etc. are collected by counselors electronically. This analysis was done on data from 2005 – 2011 with the aim of describing trends in caller and call characteristics across time.

The analysis showed that predominantly male callers (>70%), majority of callers were 15-19 followed by under 15 years old, callers 20-29 years old increased from 26% in 2005/6 to 55% in 2010/11, now, more than 85% of calls are from 15-29 year olds and most callers (>90%) are single/not married.

Lessons learned

- On-going service promotion increases number of genuine calls,
- Important to manage counselors' stress,
- Linkage with partner organizations builds knowledge and capacity of counselors, and
- Supportive supervision improves service quality.

The challenges they faced were:

- Inability to meet service demand,
- Staff turnover,
- Telephone service related problems,

- Lack of updated referral directory for care and support services,
- Power interruption, and
- Financial constraints for telephone service cost.

Finally the presenter concluded by pinpointing the following remarks:

- Increased call volume and extended geographic reach suggest *Wegen* is an important and growing source of HIV/AIDS information in Ethiopia,
- Need to design strategy to reach more women and MARPs,
- Need to improve linkage of callers to care,
- Expand the capacity of the Talkline, and
- Incorporate new service components like FP, SRH, Maternal and Child Health, Malaria, etc.

The questions asked were how is the coverage in the rural areas? What do you comment on the 'stress' of the servers? Have you analyzed servers against age and sex?

The presenter responded that they don't have data for the rural areas. The stress is due to high business and this leads the caller to be disappointed. Age and sex analysis will be done in the future.

Presentation 62: Evaluation of the performance of determine TB lipoarabinomannan antigen test for the diagnosis of tuberculosis suspects with and without HIV co-infection in selected health centers of Addis Ababa, Ethiopia, by Selam Nigussie.

As background the researcher put some relevant information about TB. It continues to be an important global problem, most cases occur in developing countries, like Africa, Ethiopia ranks 7th among the world's 22 high TB burden countries and the era of HIV has increased TB caseload, about 12% (1.1 million) TB cases are HIV infected.

The detection of lipoarabinomannan (LAM) Antigen in urine has proved very useful as diagnostic tools for the detection of TB.

The general objective to evaluate the performance of urine determine TB LAM antigen test for the diagnosis of tuberculosis suspects with and without HIV co-infection. The specific objectives were

- To determine the performance of urine determine TB LAM Ag assays for the diagnosis of smear negative TB patients and HIV infected TB suspects, and
- To determine the performance of determine TB LAM test with different clusters of independent variables.

A cross-sectional study design was conducted from September 2011 to March 2012. The study populations were TB suspects with and without HIV co-infection who fulfill the inclusion and exclusion criteria. The maximum sample size for method validation experiment is 100-200. Following judgment sampling technique, a total of 122 TB suspects were consecutively recruited.

The results showed that of the culture positives, 9 (25.7%) were HIV co-infected and from the suspects, 24/35 (68.6%) were diagnosed as smear negatives.

Performance of determine TB LAM test for the diagnosis of TB, from the 122 study participants the tests were positive in 15 (12.3%), of these 2 were culture negatives, i.e. falsely positives

The performance of determine TB LAM test was: Sensitivity = 37.1% (95%CI: 21.5-55.1), Specificity = 97.7% (95%CI: 91.9- 99.7), Positive predictive value (PPV) = 86.7% (95%CI: 59.5-98.3) and Negative predictive value (NPV) = 79.4% (95%CI: 70.5- 86.6).

What happened when determine TB LAM test was compared with conventional smear microscopy?

- 7 additional TB suspects (that were missed by the conventional AFB smear microscopy) were positive by determine TB LAM test, of these 2 were culture negative.

- Relevance of LAM in smear negatives: 4 TB suspects (that were missed by the determine TB LAM test) were positive for AFB by microscopy, of this 1 was culture negative.

When the two combined an interesting additive effect occurs. The sensitivity and specificity in picking suspects to be positive were improved.

Among patients diagnosed as smear negatives the observed performance of determine TB LAM were: Sensitivity = 20.8% (95%CI: 7.1- 42.2), Specificity = 97.7 % (95%CI: 91.9- 99.7), PPV = 71.4 % (95%CI: 29.0- 96.3), and NPV = 81.6 % (95%CI: 72.7-88.5).

It was found significant association between smear status ($X^2=36.45$, $P=0.001$) and determine TB LAM test result.

Performance of determine TB LAM test among HIV co-infected TB suspects, the observed performance of the determine TB LAM test in HIV co-infected groups were: Sensitivity = 55.6% (95%CI: 21.2- 86.3), Specificity = 100 % (95%CI: 73.5-100), PPV = 100 % (95%CI: 47.8- 100) and NPV = 75.0 % (95%CI: 47.6- 92.7).

From the HIV-TB co-infected individuals, when determine TB LAM is compared with smear microscopy: Determine TB LAM was positive in 5 individuals and smear microscopy were positive in an individual. Further stratified by their level of immunosuppressant: When $CD4 < 200$ cells per μl , 5 HIV infected individuals positive by determine TB LAM test, but negative with AFB microscopy. The results are indicating the possible promise of determine TB LAM in diagnosing TB patients with advanced immunosuppression.

The conclusions made were

- The overall sensitivity and specificity of determine TB LAM test in this study was 37.1% and 97.7%, respectively.
- An important additive effect was observed when sputum smear microscopy and determine TB LAM tests were used in combination, and
- The use of determine TB LAM test in diagnosing TB in HIV infected individuals especially in those with advanced immunosuppression is promising.

Finally, the researcher recommended that

- Combining determine TB LAM with smear microscopy for the diagnosis TB in peripheral health settings where smear microscopy remains the only microbiological test could be considered for TB diagnosis;
- Considerations should be given for the use of determine TB LAM alone or in combination with smear microscopy for TB diagnosis in HIV patients mainly in severely immunosuppressed patients, and
- Further researches aimed to evaluate the performance of determine TB LAM test in pediatric TB, extra-pulmonary TB, smear negative TB, and in HIV patients in different geographical locations are warranted.

Presentation 63: Survival Status and the Predictors of Mortality among Adult HIV Positive Individuals on Antiretroviral Treatment in Debre Markos Referral Hospital, Northwest Ethiopia: Retrospective Cohort Study, by Nurilign Abebe and et.al

Some of the introductions explained by the presenter were in the 30 years since HIV was first discovered, the disease has become a devastating pandemic, taking the lives of 30 million people around the world. At the end of 2010, an estimated 34 million people were living with HIV globally. In Ethiopia, patients on ART in 2009=152,472, 2010=207,733 and 2011/12=333,453 with adult ART coverage of 86% (**HAPCO/ 2012 country report**). HIV/AIDS reduce life expectancy by 7 years. Mortality declined by 65%, pre-HAART group the mortality rate was- 58.1 /100 PYO and HIV/AIDS related death rate was 25.9/100 PYO.

The general objective of this study was to determine survival status and predictors of mortality among adult HIV positive individuals taking ART in Debre Markos Referral Hospital, Northwest Ethiopia. Sep, 2005 -

Feb, 2013. The study design was facility based retrospective cohort study. The study populations were selected adult HIV positive individuals' record that fulfills inclusion criteria on care and support follow up at Debre Markos Referral Hospital ART.

The results showed that 640 adult HIV infected individuals were followed from 2005 to 2013. At the end of study period, 379 alive and 261 died. About 62.3% (399) were at WHO clinical stage three during the initiation of ART. Overall estimated survival duration after ART initiation was 65.22 (95%CI=61.409-69.043) months and overall mortality rate of 10.74/ 100 PYO. Risk of death was increased in patient of ambulatory and bedridden (**2.727 and 2.382**) times than patients in working functional status. Patterns of survival function of patients on ART treatment in Debre Markos referral Hospital by base line functional status, 2005-2013. (Log rank test $p < 0.001$)

Fair and poor ART adherence was at high risk of death (2.169 and 1.887) times than those with good adherence. Patients in WHO stage III & IV were at higher risk by 2.164 times than stage I&II. Absence of TB prophylaxis is risk for death by 3.980 times than those with TB prophylaxis. A patient with no side effect was at risk of death by 7.8 times than those with side effect.

In conclusion the Kaplan-Meier results showed that the general mean estimated survival time of patients after HAART initiation is improved. However, there was high mortality rate during early phase of treatment especially within the first 6 and 12 months.

Significant predictors of mortality after HAART initiation were: Lower baseline hemoglobin, ambulatory and bed ridden functional status, poor ART adherence, advanced WHO clinical stage, absence of recent TB prophylaxis, unrecognized side effects and persistent unexplained chronic diarrhea (>1 month).

As recommendations for clinical practitioners: Hemoglobin should be measured at every visit and re-adjust medications that aggravate anemia, patients being on ambulatory and bedridden functional status should be assessed for other possible concomitant disease conditions and treated with closer follow up so as to minimize the risk of death, patients with unexplained chronic diarrhea should be treated promptly and prevent its occurrence. Since poor adherence to ART is significant predictor of mortality, every patient has to be counseled intensively than what is done previously and important clinical characteristics of patients like WHO staging, CD4 count, Hgb, and other Ols should be documented correctly and regularly. The health team should access health status information of patients particularly being in ambulatory and bedridden functional status, and adherence preparation, supporting and assessment mechanisms must be employed.

For researchers it was also recommended that the cause for early mortality should be studied further and prospective study is necessary to get quality data.

The questions raised were when can you say zero infection, death and stigma? Can this be possible? Can we declare that? It was responded that it is a global recommendation and this can be realized.

Major topic: Health Care Financing

Moderator: Ato Lulsegd Ageze

Presentation 65: "Willingness to Join and Pay for the Newly Proposed Social Health Insurance Scheme among Teachers In Wolaita Sodo Town Government Educational Institution, South Ethiopia", by Tesfamichael Alaro

Quoting different sources, the presenter spoke of cost sharing between beneficiaries and governments and said that Social Health Insurance (SHI) was one of the sustainable health care financing mechanisms. He said that SHI establishment has been advocated by WHO as a key to achieving universal coverage of health care and to protecting access to health services, particularly for the disadvantaged in less developed countries.

SHI for all is a step towards achieving the first of the MDG; however, low and middle-income countries rarely use this approach. In this connection the government of Ethiopia is currently undertaking a number of activities to introduce SHI.

The study area is Sodo town, Wolaita Zone from February 5 to March 10 / 2012 and the study design is a cross sectional study. The source populations are all teachers in government educational institutions in Sodo town. The sample size was 384.

Result: 192 (58.5%) of the teachers thought that insurance is an amount paid to get compensation if something bad happens. Of the participants 83 (43.2%) were from primary level; 72 (37.5%) from higher educational institution and 37 (19.3%) from secondary level. Willingness to join and pay: 234 (71.3 %) of the respondents were willing to join for the newly proposed SHI scheme, of these 74.4 % were willing to pay for the proposed SHI. The median willing to pay values found in this study was 81.66 ETB (US\$ 4.66) per person per month, willing to pay per person per year reached 979.92 ETB (US\$ 55.99).

Factors affecting willingness to pay for SHI: previous history of inability to pay for medical bills predicted the willing to pay for SHI scheme. Respondents who experienced problem of paying medical bill over the past 12 months preceding survey were 2.5 times more likely to be willing to pay for the SHI scheme as compared to those who didn't (AOR= 2.574, 95% CI. 1.152, 5.751).

Educational status of the respondent was also found to be one of strong predictors of willingness to pay for SHI. Respondents with higher education were more likely to be willing to pay than their lower cadre counterparts and respondents who had master's degree were 5 times more likely to be willing to pay as compared to those teachers who had diploma (AOR = 5.527, 95 % CI. 2.128, 12.063). Married persons were more likely to be willing to pay for SHI than those who were single (AOR= 4.507, 95 % CI. 2.159, 8.505).

Conclusion: more than ½ of the teachers in government educational institutions have no awareness on the very basic construct of health insurance scheme. However 71.3 % of the teachers were willing to join and about 3/4th of them were willing to pay for the proposed SHI scheme. Moreover, 47.1 % of those willing to pay were willing to contribute greater than or equals to 4 % of their monthly salary as premium and the median willing to pay was 81.66 ETB (US\$ 4.66) per person per month. These give policy-makers an indication of the financial implications of a policy under consideration. Employees from the public sector are not assisted in organizing their health care and consequently, they use the out-of-pocket system to pay their health bills. Educational status, marital status, previous history in ability to pay for medical bills, and awareness to the very basic construct of HI were found to be predictors of WTP for SHI.

Recommendations: The federal Social Health Insurance Agency should engage key stakeholder categories such as teachers in awareness raising. It should promote the scheme so that every government employee will be conversant with it for its successful implementation. Policy makers and implementers should introduce strategies to win the trust of government employee by facilitating public information schemes in relation to health insurance system, particularly among those with lower educational status and a follow up study following introduction of the scheme in the study area would provide very useful information about revealed preferences.

Presentation 66: "Factors Affecting Health Extension Workers Job Motivation in Gamo-Gofa Zone, Southern Ethiopia, 2013, by Shikur Mohammed, and et. al.

The presenter said that in recognition of the huge gap between need and health care services in the country, the FMOH has focused on providing quality promotive, preventive and selected curative health care services in accessible and equitable manner to reach all segments of the population with special attention to mothers and children. In this regard, HEWs are the sizeable cadres for the implementation of HEP, who are trained to implement a Health Extension Package of 16 healthcare activities at the Kebele (village) level.

The general objective of the study is to assess Factors Affecting Health Extension Workers Job Motivation in Gamo-Gofa Zone, Southern Ethiopia.

A Cross sectional study design was used and all HEWs who were working in Gamo-Gofa Zone and all HEWs who were working in selected rural districts of the Zone were the source and the study populations, respectively. The sample size was 301 from 15 rural districts, 5 (30%) districts were selected randomly then, all HEWs within selected districts were included. To determine factors “Eigenvalue” was used and factor with a value of greater than 1.0 were kept and rest discarded. Accordingly, eight factors/parameters were identified to represent performance motivation of HEWs. After the appropriate number of factors has been determined, a factor correlation matrix was done to identify the relationship between the variables and the factors

Results: In this study, motivation was determined after computing the score of six items. Cronbach’s alpha of the scales was 0.91, factor analysis was done to reduce variables into a smaller and more manageable number of factors. Eight factors were identified to represent the areas covered by the items. The factor loadings of the items ranged from 0.58 to 0.83. The Cronbach’s alphas of the scales ranged from 0.70 to 0.84. The main motivating factors for health extension workers were community acceptance and continued education, but the main de-motivating factor was excessive workload.

Conclusion: Better HEW job performance can be achieved through training or refresher courses and recognition/feedback from the community and workload can also be reduced through training and deployment of new HEWs. Health managers should clearly understand the impact of different human resource management tools on staff retention and staff motivation to perform well.

Major topic: Nutrition

Moderator: Dr. Solomon Shiferaw

Presentation 69: “Climate change, crop production and child malnutrition in Ethiopia, 1996-2004: A panel data analysis,” by Seifu Hagos and et.al.

The objective of this analysis was to estimate the effect of climate on child malnutrition for the period of 1996-2004.

The dataset constitute a panel of observation of multiple variables. Crop production and livestock data for administrative zones included in the study were obtained from CSA Ethiopia. The total amount of crops produced during the main harvesting season in each zone was converted into per capita crop availability using projected population of each administrative zone. Monthly rainfall data for each studied zones were obtained from the respective weather stations. From the DHS data, created pseudo panel data set obtaining malnutrition estimates from the CSA for the same period. Malnutrition data were then matched to crop, livestock and other data by year. Altitude data at 30 arc-seconds (“1 km) resolution and temperature data were downloaded by title from the world climate data source. The panel data regression techniques to estimate the effect of climate variability on child wasting, underweight and stunting were applied.

The results found were unlike the average growing season temperature, rainfall showed marked variation over time as well as agro-ecologies. Additionally, it was found that sometimes the quadratic terms of rainfall rather than the liner forms were significant predictors for current level of child underweight and stunting. Temperature has a significant effect on child under weight and stunting.

The conclusion and recommendation made were rainfall and temperatures are partly predicting the variation in child stunting and underweight in Ethiopia. Models vary in predicting child stunting and underweight across the three agro ecological zones indicating that a single model is not applicable.

Presentation 71: “Prevalence of exclusive breastfeeding practices and associated factors among mothers in Bahir Dar city, Northwest Ethiopia: a community based cross-sectional study,” by Abdulbasit Musa.

As introduction some facts about breast feeding were sited. Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants. As per the WHO recommendation,

infants should receive exclusive breastfeeding (EBF) for the first six months of life to achieve optimal growth, development and health. Infants exclusively breastfed for 6 months, presented with fewer infectious episodes such as acute respiratory infection, acute Otitis media, and gastroenteritis than their partially breastfed or non-breastfed peers. Global risk assessment of suboptimal breastfeeding indicates that 96% of all infant deaths in developing countries are attributable to inappropriate feeding occurring during the first six months of life.

The 2011 EDHS showed the proportion of infants less than six months who received EBF as 52%. Therefore, assessing factors associated with exclusive breastfeeding is crucial to implement interventions that speed up the government efforts and decrease the rates and burden of infant morbidity and mortality. A community based cross-sectional study was carried out from 10 to 25 June 2012 in Bahir Dar city, Northwest Ethiopia. All 819 mother-infant pairs sampled were included. Of all the infants, 360 (44%) were first born infants, and 536 (65.4%) were six months and above.

The results showed that 703 (85.8%) of the respondents had planned to offer EBF and 742(90.6%) delivered at HIs. Ever BF= 815 (99.5%) = consistent with EDHS 2011 report (98% national, 97.7% Amhara region), Early initiation= ,709 (87.0%), = is higher than national and Amhara region (52% versus 37.5%), Colostrums fed= 679 (83.3%), Prelacteal feed= 220 (27.0%), and 760 (93.5%) of the participants received IFCA. This study showed 412 (50.3%) of the participants practiced EBF appropriate to their age with the mean duration of EBF being 3.0 months (SD±2.4). Of 283 mothers with infants aged less than 6 months during the study, 169 (59.7%) were exclusively breastfeeding their infants, but only 243 (45.3%) of infants six months and above received EBF when asked retrospectively.

In the first month of life, 74.2% of infants received EBF which declined to 70.8% at 2-3 months and 47.5% by the age of 4-5 months.

In this study child age, maternal occupation, prenatal EBF plan, place of delivery, mode of delivery and receiving counseling/advice on infant feeding were significantly and independently associated with EBF practice in multiple logistic regression analysis. Infants in age group of 0-1 month and 2-3 months had odds ratio of 3.8 and 2.8 respectively to receive EBF than whose ages were six months and above. Housewives were more likely to practice EBF than any other occupations. Mothers who delivered their last child at health facility were more likely to practice EBF compared to those who delivered at home.

In conclusion prevalence of exclusive breastfeeding was low in the town of Bahirdar. Based on the findings, the following recommendations were made: strengthening infant feeding advice/counseling both at community and institutional levels, promoting institutional delivery, providing adequate pain relief and early assistance for mothers who gave birth by caesarean section, and enabling every mother to have prenatal EBF plan during antenatal care in order to increase the proportion of women practicing EBF.

Finally comments were made by the audiences:

- EBF for Bahir Dar may not be comparable with national average (other countries), and
- Pain management may improve timely initiation of BF.

Presentation 72: Predictors of breastfeeding cessation among HIV infected mothers in Southern Ethiopia: A survival analysis, by Demewoz Haile, et.al.

EPMTCT guideline, HIV positive mothers are recommended to breastfeed exclusively for the first six months of life followed by introduction of appropriate complementary feedings at sixth months with continued breastfeeding until 12–18 months (12). Identifying predictors of breastfeeding cessation among HIV infected women is important for targeting the education and counseling messages.

The objective of this study was to assess the predictors of breastfeeding cessation among HIV positive mothers in Sidama Zone, Southern Ethiopia.

The results showed that survival analysis for breastfeeding cessation

- The estimated KM proportions of women who were breastfeeding at 6, 9, 12 and 17 months were 89.3%, 75.3%, 66% and 17%, respectively,
- The mean duration of breastfeeding among HIV positive mothers was 13.79 [95% CI: (12.97–14.59) months, and
- The median survival time for breastfeeding was 17 months.

This study found that 66% of HIV positive mothers breastfed their HIV exposed infants for 12 months.

Breastfeeding cessation was associated with presence of animal milk at home (milk from owned cows).

Monthly income was also an independent predictor of early breastfeeding cessation. Having larger family size is protective of early breastfeeding cessation. Introduction of other foods before 6 months to infants was one of the predictors of breastfeeding cessation in bivariate model.

In conclusion above one third of HIV positive mothers stopped breastfeeding before 12 months. The estimated KM proportions of women who were breastfeeding at 6, 9, 12 and 17 months were 89.3%, 75.3%, 66% and 17%, respectively and monthly income, bottle feeding and family size were the independent predictors of breastfeeding cessations.

It was recommended to strengthening current counseling modality on avoidance of bottle feeding and continued breastfeeding for improved HIV free survival and further research.

The researcher was requested to comment on survival analysis versus cross-sectional study. It was responded that survival analysis is good for the data and model.

Major topic: Mental and non-communicable Disease (under this topic, presentation numbers 76, 77 and 78 are presented.

Moderator: Prof. Atalay Alem

Presentation 76: “Determinants of Non adherence to Ivermectin for Onchocerciasis Control Therapy among Adult Residents in Hurumu District, Illu Aba Bora, Oromia, West Ethiopia,” by Mulatu Ayana and et. al.

In the introduction it was noted that Onchocerciasis is the second leading infectious causes of blindness, 123 million people live in endemic areas and >95% reside in Africa.

The goal of APOC is to reduce onchocerciasis within 12-15 years using the strategy of yearly community-directed treatment with Ivermectin (CDTI) in endemic areas but, due to immigration of infected individuals and low coverage and non adherence, the disease burden remained a threat.

The objective of the study was to identify determinants of non- adherence to Ivermectin for onchocerciasis control therapy among adult residents in Hurumu district, Illu Abba Bora, Ethiopia, 2012.

Unmatched case-control study was conducted. The cases (=185) were those who missed two or more doses and the controls (=185) were those who had not missed any dose. Participants were selected using Systematic random sampling technique and data collection methods were interviews using a structured questionnaire.

The data were collected from 368 participants. The results showed that none of the socio-demographic factors was statistically associated with non adherence. Five major associated factors were identified: not at risk perception of the disease, not preferring CDDs to be drug distributors, perception of knowledge of CDDs about onchocerciasis, not perceiving risk of missing the annual doses and not perceiving benefit of the annual dose.

Those who did not adhere to the Rx were not in frequent contact with CDD. Thus, they did not have enough information about onchocerciasis and that anybody at endemic area is at risk of the disease. This means lack of such awareness could make them not to adhere to the treatment protocol.

The other predictor was factors related to the annual distributors of the drug (CDDs). Odds of preference for community drug distributors (CDDs) were low among cases than controls. This means that their non adherence attributed to their low preference to the distributor (CDD). They interrupted doses probably because of that they thought the CDDs were lay person. The reason for non - adherence could be the inadequate knowledge of the CDDs related to the disease and the drug.

The other predictor variable was whether missing the annual dose(s) of ivermectin had problems. The possible explanation could be that most of the time people become stick to Rx procedure (protocol) while they are in acute state of the diagnosis.

The study concluded that five predictors of non adherence were revealed: not at risk perception, not preferring CDDs to distribute the drug, perceived knowledge of CDD, perception of missing the annual dose and not perceiving benefits of the annual drug distribution.

This shows that health education is needed to increase risk perception in the community and dispelling misconceptions and the benefits of the annual distribution of the drug in order to mitigate and control the disease.

Presentation 77: “Emerging Chronic Non-Communicable Diseases Epidemic in Ethiopia,” by Abebe Bekele and et. al.

As background information, it was shown that NCDs are chronic conditions that cause death and impaired quality of life. The global burden of NCDs is growing very fast with an estimated 36 million deaths (63% of all deaths globally and 80% of deaths (29 million) in LMIC). Africa is challenged with a double burden of diseases.

The purpose of this study was to depict the patterns and trends of common NCDs in HFs in Addis Ababa, and provide concerned bodies with information on the burden of NCDs at health facility level.

The study design was retrospective data collection from hospital records for 5 years: 2007 to 2011. Nine hospitals: 4 governmental and 5 private hospitals were included in the study. The study subjects were new patients registered each year and the source of data was patients' record. The records of patients with cancer, cardiovascular diseases, chronic kidney diseases, chronic lung diseases, and diabetes mellitus were reviewed.

This assessment revealed that NCDs are becoming public health priority in the country. And, hence, need for population-based representative survey plus surveillance to quantify the burden with risk factors for policy formulation and effective interventions against this emerging epidemic.

Presentation 78: “Public stigma against people with mental illness in Gilgel Gibe Field Research Center, Southwest Ethiopia,” by Eshetu Girma, and et.al.

In the introduction it was explained that stigma happens because of lack of knowledge, misconceptions, prejudice and fear. Stigma affects day-to-day social health of the patients, delays treatment seeking behavior, affects compliance behavior, affects rehabilitation process, results in patients and family self stigma and spoils self esteem and may provoke committing suicide. Stigmatization is a violation of human right.

The objective of this study is to measure public stigma and identify correlates of stigma against people with mental illness in GGFRC.

The methods utilized were cross sectional study among randomly selected 845 community members, out of which one urban (1,598 HHs) and 4 rural (4,268 HHs) kebeles. Interviews were conducted using the 40-items community attitude towards the mentally ill (CAMI) scale.

1. Authoritarianism (AU): a view of the patients as someone who is inferior who requires supervision and coercion.
2. Benevolence (BE): a humanistic and sympathetic view of the patients.
3. Social Restrictiveness (SR): the belief that patients are a threat to society and should be avoided.
4. Community Mental Health Ideology (CMHI): the acceptance of mental health services and the patients in the community.

The results showed that most often perceived causes of mental illness were stress, poverty and rumination. The most often perceived signs of mental illness were talking to oneself, forgetting oneself and talking too much.

In conclusion it was noted that there is significantly higher stigma in rural areas, more undermining but less avoidant attitude, people with higher income but with lower education had higher stigma. Exposure to mental illnesses information and the patients reduces stigma and people with an explanatory concept about the causes of mental illness had lower Stigma.

Finally it was recommended that IEC about the causes, signs, and nature of mental illnesses can help to reduce stigma and further studies on the effects of stigma on delay for treatment seeking behavior and quality of life of people with mental illness.

Presentation 79: Assessment of Knowledge, Attitude and Practices of Primary Health Care Providers towards Mental Illness in Addis Ababa, Ethiopia, by Zegeye Yohannis, and et.al.

The introduction part showed the burden of the disease. Globally by 2030, the burden of disease from mental health problems is expected to rise from the 4th to the 2nd leading cause of disease burden. Despite the fact that 20- 30% of patients in primary health care are mainly due to emotional problems, the majority of these were often remaining unrecognized, misdiagnosed and inappropriately managed. Primary care providers often do not have the tools necessary to diagnose or treat patients with mental illnesses. Mental health care is often confined largely to urban areas and restricted to hospital-based care for people with severe mental disorders. The presenter pointed out that many barriers show the magnitude of the problem. Cross sectional study was conducted from March to April 2011 in Addis Ababa. It has a total of 608 health facilities, out of these 31 are health centers. Out of 31 health centers, 13 of them have psychiatry units in 2010.

The study population was all primary health care providers working at outpatient and inpatient departments at Government financed health centres in Addis Ababa. The sample size was 612 and 581 people participated in the study.

The results showed that 532 (91.6%) of the respondents said they didn't take any short course training on mental health; 468 (80.6%) of the respondents prefer treatment for mentally ill patients from modern health care and 402 (69.2%) of participants believe that mental health problem is a public health problem in Ethiopia especially in Addis Ababa. Four hundred eight (70.2%) of primary health care providers consider epilepsy as a mental illness and 50 (8.6%) of the health workers said that mental illness is a contagious disease. Four hundred fifty two (77.8%) of the respondents strongly agree with integration of mental health in primary health care and 558 (96%) of the respondents believe that mental illness is a treatable disease. Three hundred fifty nine (61.8%) of the respondents have no experiences in diagnosing and treating mentally ill patients. Five hundred three (86.6%) of respondents said that they have never seen cases of mental disorders in the past three months prior to this study. One hundred forty seven (25.5%) of the respondents feel that mentally ill patients should be managed only at psychiatric hospital and 200 (34.4%) believe that mentally ill patients should be managed only by mental health professional.

Basic psychiatric training is significantly associated with good knowledge and favorable attitude with (AOR=1.48, 95%CI: 1.04-2.13) and (AOR=1.58, 95%CI: 1.03-2.44) respectively.

At the end of his discussions, the researcher made the following recommendations:

- ✓ Encouraging primary healthcare staff who have favorable attitude and good knowledge towards mental illness.
- ✓ Improving training in basic mental health care and managing the work load may positively impact the integration of mental health care into primary health care.
- ✓ Supervision and mental health professional support should be enhanced by the Ministry of Health, Amanuel Mental Specialized Hospital and other responsible institutions.

The speaker concluded his presentation with this quotation: **“No Health without Mental Health”**.

Mjor topic: HIV/ TB (under this topic presentation numbers 81, 82, 83, 84, 85 and 86 are discussed)

Moderator: Dr. Ashenafie Haile

Presentation 81: Serum lipid profile abnormalities among HIV infected adults receiving first line HAART at TASRH, ART clinic, by Ezra Belay, and et.al.

The introductory part showed very relevant findings on HAART. To mention some HAART prevents/minimizes HIV transmission by reducing viral load in addition to improving and lengthening life of HIV infected peoples. Ethiopian people who were on ART in 2011 were 247,805 (EHDS). However, HAART has been frequently associated with a number of metabolic abnormalities such as Dyslipidemia/Lipodystrophy, insulin resistance, glucose intolerance all of which increases risk of CVD and diabetes, representing a challenge in the treatment of HIV infection. Besides Lipodystrophic body changes can jeopardize the quality of life of these patients, leading to low adherence to HAART and subsequent virology and clinical failure.

The general objective of this study was to determine the prevalence and compare dyslipidemia in first line HAART users and HAART naïve adults. The study design was a comparative cross sectional and 70 ART treated and 71 ART naïve participants were selected using appropriate formulae of sample size determination.

General Prevalence of lipid profile abnormalities in this study: 41(57.7%) of ART naïve participants & 56(80%) of ART participants was diagnosed with dyslipidemia ($X^2=8.1$, $P=0.004$, $OR=2.9$, $95\%CI=1.3-6.7$); participants with single abnormal lipid profile was 20 (28.2%) in ART naïve groups and 22 (31.4%) in ART groups ($X^2=0.2$, $P=0.7$ $OR=1.2$ $95\%CI=0.5-2.6$), number of patients with mixed (two or more) lipid profiles abnormalities was 21(29.6%) in pre-HAART group and 34(48.6%) in HAART group($X^2=5.34$, $P=0.02$, $OR=2.56$).

Lipid Ratios: TC/HDL ratio ≥ 5 found in 27.1% of ART and 8.5% of ART naïve participants ($p=0.006$, $OR=4.0$); and 60% of ART groups and 42.3% of ART naïve groups have had a high TG / HDL-C ratio ≥ 2.4 ($OR=2.1$, $95\%CI: 1.1-4.0$).

In conclusion the overall prevalence of dyslipidemia was 80% in ART groups and 57.7% in ART naïve groups; use of HAART was positively and significantly associated $TC \geq 200$, $TC/ HDL-c$ ratio ≥ 5 and $TG/ HDL-c$ ratio ≥ 2.4 ; high prevalence of other abnormal lipid profiles ($TG \geq 150$, $LDL-c \geq 130$ and $HDL-c < 40$) was also found in ART groups compared with ART naïve groups, even though their differences did not reach statistically significant level.

The recommendations made by the researchers were

1. Another study with large sample size and prospective cohort in nature is needed to explain fully the causal relationship between each class of HAART and dyslipidemia in our setting.
2. Determined these lipid metabolic derangements at early stage in both HIV infected patients and those initiated HAART is important for identifying potential interventions as well as additional clinical measurements that can be used to improve the care of HIV patients.
3. Lipid profile measurements before and after start of HAART; then periodically through treatment follow-up which are not currently part of routine care in our countries, could become an important parameter to increase survival and improve treatment outcome.

Presentation 82: Risk factors associated with TB co-infection in HIV/AIDS patients taking Antiretroviral Therapy (ART) in Nekemte hospital, Ethiopia, by Obsa Amente.

In the introduction relevant findings were explained. According to WHO 2009: From 9.2 million new cases of TB in 2006, 7.7% were HIV infected. Of the 1.7 million deaths from TB in 2008, almost one third was people co-infected with HIV or AIDS. HIV infected patients on ART have a TB incidence rate of 5.4 cases/100 patient-years (10 fold higher than HIV negative patients). In Ethiopia, 31% of TB patients are HIV positive/co-infected.

The general objective of this study was to identify risk factors associated with tuberculosis co-infection among HIV and Aids patients taking ART in Nekemte Hospital, Western Ethiopia.

The study design and period was an observational analytic case control study design from January to September 2013. The study populations are HIV/AIDS patients who were 18 years of age (i) co-infected with TB and (ii) not co-infected with tuberculosis but both are currently taking ART from Nekemte hospital. The sample size was 367 of which 92 cases and 275 controls.

The results showed that from the total respondents 28.3% of cases and 27.6% of controls were between 28 and 32 years old with the mean age of 33.76 years. This implies that HIV affects mainly those who are most in a productive age group, however; TB co-infection is much higher in old age than lower age group. More cases do not take their ART drug as prescribed by a physician on a regular basis compared to the control groups ($p < 0.001$). A higher proportion of cases reported a balanced diet as the only measure to prevent tuberculosis compared to the control group ($p < 0.001$). In addition a large number of cases had a history of substance exposure including smoking, alcohol, and khat compared to the control group ($p < 0.001$).

After adjustment for potential confounders having formal education (OR=2.61; 95%CI: 1.13, 5.22), waste disposal outside the compound (OR=2.75; 95%CI: 1.61, 4.69), monthly income >30USD (OR=2.09; 95%CI: 1.20, 3.64), no contact history of TB patient in a family (OR=15.31; 95%CI: 5.28, 44.37), taking ART on a regular basis as prescribed (OR=24.84; 95%CI: 7.32, 84.22), knowing how to prevent TB with a drug or prophylaxis (OR=6.07; 95%CI: 1.04, 35.37), and no exposure to substance like smoking (OR=36.80; 95%CI: 12.88, 105.13) were independently protective of the development of active tuberculosis in HIV and Aids patients taking ART.

Based on these findings, improving health, social, and economic advantages, patients with HIV and Aids need to be provided with health education, the quality of counselling should be considered, government should focus on improving the educational status of the community and further research were recommended.

Presentation 83: Sexual behavior and vulnerability to HIV infection among seasonal migrant laborers in Metema district, Northwest Ethiopia: A cross-sectional study, by Kassa Tiruneh.

Some of the evidences that were put as introduction were in Amhara National Regional State adult HIV prevalence is 1.6%. The 2009 ANC surveillance report revealed that the prevalence of HIV in Metema hospital was 7.5% and it is identified as HIV epidemic area. Greater than 80,000 migrant workers travel to this district every year to find a seasonal farm job and return home in six-months to one-year intervals.

Community based Cross-sectional study using quantitative and qualitative data collection methods was conducted from July 8 to 18, 2013 at Metema, Delelo and Mertread farms. Multi-stage sampling techniques were used and by systematic random sampling the sample size was 756 study participants.

The results showed that 756 individuals were interviewed. The migration related behaviors were 730 (97%) migrated to work at age 15 or later with the median age at first migration was 19 (IQR 17-22). Daily income

ranged 40- 200.00 ETB with median income of 70.00 ETB /day and drank alcohol in the preceding 6 months.

The migrants' knowledge of HIV transmission and prevention found to be 753 (99%) ever heard of HIV and AIDS and 96% had the information before coming to the farm. Injection with infected needle (87%), sexual intercourse (77%), unprotected sex (37%), blood contact (22%), were reported as modes of HIV transmissions, only few (8%) mentioned multiple sexual intercourse. When asked about HIV prevention methods, sex with one partner (51%), consistent condom use (46%), not to use infected needles (42%), no sex at all (40%). On the perception of HIV risk 571 (76%) respondents perceived HIV/AIDS as high risk disease. On their risky sexual behaviors, 582 (77%) had sex in their life time, of these, 579 (99%) had sex at age 15 or later, and age at first sex ranged between 13 and 29 years with mean of 18.8 years.

The sexual behavior of the migrants showed that 397 (68%) reported non-marital sex in the preceding 6 months, of these, **293 (74%)** reported sexual intercourse with CSWs, 195 (49%) reported transactional sex and 273 (69%) reported multiple sexual partners. Only 247 (42%) ever used condoms during any sex episodes, 202 (51%) used condom during their recent NM sex, 195 (49%) do not use condom during their recent NM sexual and 296 (75%) reported to have drunken alcohol at their last sex with CSWs.

Multivariate logistic regression analyses revealed that recent information on HIV/AIDS, staying longer on the farm were significantly associated with condom use at Last NM sex. Respondents stay 5-6 months on the farm were 2.77 times more likely to use condom at their LNM sex (AOR=2.77, 95% CI:1.4,5.19).

Age, daily income, paying for sex, drinking alcohol were significantly associated with having multiple (>2) sexual partners in the preceding 6 months.

Respondents who earn a daily income above ETB 100.00 were 2.33 times more likely to have multiple sexual partner than who earn below (AOR=2.33, 95% CI:1.28,4.21). Those who pay for sex were 7.59 times more likely to have multiple sexual partners (AOR=7.59, 95% CI: 5.08, 11.34) and those who drink alcohol were 1.73 times more likely to have multiple sexual partners (AOR=1.73, 95% CI: 1.11, 2.68).

Based on these findings, it was recommended that a well-organized IEC/BCC effort is warranted to effect behavioral change and

- Targeted HIV/AIDS prevention, treatment, care, and support interventions,
- Condom access, education, and utilization programs should be in place at migrant workers' destinations and farm sites,
- Promotion of condom use and HIV testing at departure and return of seasonal workers are recommended, and
- Research is needed to further understand the prevalence of HIV in other "development corridors" and in Districts with high seasonal out migration.

A question from a participant: 'why did you consider <6 months of migrants?' Response: these groups are mostly young people who are vulnerable to HIV.

Presentation 84: Non-adherence to anti-TB treatment and determinant factors among patients with TB in Northwest Ethiopia, by Akilew Awoke and et.al.

In the introduction, the researcher had sited relevant evidences on TB such as HIV pandemic presents a significant challenge to global TB control, Ethiopia stands 7th in the list of high TB burden countries. Adherence to TB treatment is crucial to achieve cure and avoid emergence of drug resistance. In sub-sub Sahara Africa, there is high rate of losses to follow up of TB patients, ranged from 11.3% to 29.6%.

The general objective of this study was to determine the level of non-adherence to anti-TB therapy and associated factors among TB patients in northwest Ethiopia. All health facilities providing anti-TB services in 3 major towns of North Gondar (Gondar, Metema and Debarke) were included.

The study design was an institution based cross-sectional survey from February 20 – March 30, 2013. Participants were those eligible patients who were new TB patients aged at least 15 years regardless of the site or the smear status of their TB. The sample size was estimated to be 281.

The results showed that the overall calculated non-adherence over one month and the last four days before the survey were 10% and 13.6% respectively.

In the adjusted analysis, factors associated with non-adherence to anti-TB treatment were forgetfulness, phases of chemotherapy, symptoms of TB during the interview and HIV co-infection. TB patients who were in the continuation phase of the chemotherapy were about 7 times more likely to be non-adherent. HIV co-infected TB patients were less likely adherent because these patients have many pills to take and adverse effects of anti-TB medication are more common.

In conclusion the researcher had pointed out that non-adherence among TB patients was high, forgetfulness, being in continuation phases of chemotherapy, having symptoms of TB during the interview, and HIV co-infection were significantly associated with anti-TB medication non-adherence.

The recommendations made were in general, adherence is a dynamic issue and barriers are also liable to change over time, which necessitates continuous multi-disciplinary collaborative researches. Special attention and adherence counseling should be given for those who remained symptomatic, who are co-infected with HIV and those in the continuation phase of the chemotherapy. Watch alarm may be considered for those who had problems of forgetfulness.

Presentation 86: Trends on prevalence of HBV, HSV-2, Syphilis on HIV positive and HIV negative ANC attending women over 8 years (2005-2012), by Desta Kassa and et.al.

In the introduction part, it was mentioned that among pregnant women, STIs are associated with adverse pregnancy outcomes such as spontaneous abortions, stillbirth, etc. The management of STIs is difficult and complicated because they run a long, latent, and hazardous course, remain asymptomatic, and cannot be initially detected clinically.

In Ethiopia there is paucity of data on the prevalence of HBV, HSV-2 and syphilis in pregnant women and may differ in geographically disparate cities.

The objective of this study was to determine the trend in prevalence of four major STIs in pregnant women with and without HIV infection: HIV, Hepatitis B virus (HBV), Herpes simplex virus 2 (HSV-2) and syphilis.

The design was retrospective longitudinal study, the population were pregnant women enrolled in the 2005, 2007, 2009 and 2012 ANC based HIV sentinel surveillance in 18 Health facilities located in 12 major cities in Ethiopia: Mekele, Bahirar, Gondar, Adama, Jimma, Jigiga, Asosa, Hawassa, Gambella, Harar, Dire Dawa and Addis Ababa. For lab test the plasma/serum samples stored at EHNRI were tested for the HIV antibodies (ELISA test), HBsAg (ELISA test), HSV-2 IgM antibodies (ELISA test) and syphilis (RPR test), 2007= 948, 2009= 833 and 2012= 338.

Prevalence of the STIs in all the 12 cities, and in both HIV positive and HIV negative women (merged) displayed in the following figures.

In conclusion merged data from the 12 cities showed that a decline in HIV, HSV-2 and syphilis overtime in pregnant women, which could reflect the strength of infection prevention strategies in the country. However, there is higher prevalence, variation overtime and among the health facilities in HSV-2, and HBV infection which strongly indicates the need to strengthen targeted STI interventions. Further investigation is also warranted to investigate the risk factors associated with the epidemiology, interaction, and clinical implication of those combined infections (HIV, HSV-2, HBV and Syphilis) in pregnant women.

Questions raised for the presenter were:

1. Why did you stop on 2009, why you didn't continue with the other years?
2. Why retrospective, why not prospective?
3. Graphs versus localities showed unexpected results, could it be due to the sample size.

The responses made were:

- Samples were drawn from ANC and HIV surveillance which is not fully representative of localities (using permanent sites).
- It is a retrospective study and up to 2012 will be included.

Main topic: Adolescent

Moderator: Dr. Mirgissa Kaba moderated the" session.

Presentation 88: "Awareness of Sex Trafficking and its associated Factors among Young Girls in Bahir Dar town, Northwest Ethiopia: A community based cross sectional study," by Muluken Azage and et.al.

Sex trafficking is "the illicit transportation of women into foreign countries for the purposes of sexual exploitation and for economic and other personal gains" (United Nations, 2000). The numbers of trafficked women has increased both in developed and developing countries (Bertone A.M., 2000). Those girls aged between 18 and 25 are mainly targeted by traffickers at colleges and working in poor districts in towns and cities (UN IRIN, 2004). A recent estimate indicates that trafficking reaches between one and two million people each year worldwide, 60% of which are girls (UNODC, 2012). Some of the factors associated with sex trafficking were low socioeconomic status of woman poverty, being out-of-school, unemployed, parents uneducated and unemployed, relatives or friends from abroad and internet (Omorodion F.I., 2009). In Ethiopia, thousands of teenage girls are shipped out of the country each year to the abroad. The IOM also estimated that 40,000 women and girls believed to be victims of trafficking in the country (UN IRIN, 2004). Despite the efforts made by the government and nongovernmental organization in the country, victims of young women as a result of sex trafficking are increasing were some of the remarks made in the introduction section.

The general objective of this study was to assess sex trafficking awareness and its associated factors among young girls in Bahir Dar town, Ethiopia. A community based cross-sectional study design was employed from February 1st to 30th 2012. The sample size was 456. By considering homogenous characteristics of youth girls in the town about sex trafficking awareness, four urban kebeles of the total nine kebeles were selected using simple random sampling technique. Sex trafficking awareness was measured "If a woman heard or read about sex trafficking that women are taken into abroad or foreign countries for the purposes of sexual exploitation to gain money and other personal gains".

The results showed that 60% of the study participants reported that they have heard or read about sex trafficking. The sources of information were television (64%), friends (46%), radio (37%) and reading materials (17%). The reasons for facilitating sex trafficking were hoping for better life elsewhere (72%), unemployment (50%), poverty (45%) and illiteracy (18%). The above reasons are related with searching economic opportunity. Friends (87%) and brokers (74%) were mentioned frequently as mediators that facilitate for sex trafficking. About 71% of the respondents reported that young females whose age is less than 25 were more vulnerable than those whose age is ≥ 25 . In this study 25% of the respondents had approached by someone to search unspecified job in abroad. The independent predictors of sex trafficking awareness were higher education level (AOR: 2.22, 95%CI(1.18, 4.17)), having television at home (AOR: 2.19, 95%CI (1.31, 3.67)) and being involved in gender issues training (AOR: 3.59, 95%CI% (2.11, 6.10)). All these factors are related with the accessibility of information on gender issues which leads females to have better awareness on reproductive issues and sexual rights including sex trafficking.

The conclusion and recommendation made were the level of awareness of youth females on sex trafficking in this study was found to be low. Having television at home, education status, taking training on gender

issues were the predictors of sex trafficking awareness. Hence, awareness creation on sex trafficking for youth females should be given through different approaches to reach the wider community to increase the accessibility of information on sex trafficking.

Presentation 90: “Factors Affecting the Utilization of Youth Friendly Services in North and South Wollo zones of Amhara National Regional State, 2013,” by Ashenafie Derejie

As an introduction, the researcher cited very relevant findings from previous studies. He said that sexual and reproductive health behaviors are among the main causes of death, disability and disease among young people. This is because most youth do not feel comfortable to discuss reproductive health issues with their parents and other close relatives or friends. Consequently, youth seem to be less informed, less experienced, and less comfortable in accessing reproductive health services (RHS) when compared to adults.

According to WHOs, 70% of premature deaths among adults are largely due to behaviors initiated during adolescence. In Ethiopia, the utilization of RH/FP services in the existing health care system by young people is very low. As a result, there is a high rate of unwanted pregnancies which often result in unsafe abortions and the subsequent complications.

The objectives of this study were to identify and determine the underlying factors that impede/affect the accessibility of the available youth friendly services, identify the underlying factors for the major barriers that affect the quality of the youth friendly services as well as to identify best practices and lessons of the utilization of youth friendly services in North and South Wollo Zones.

The study was conducted both in health institutions and in the community. The study design was a cross-sectional with both quantitative and qualitative methods.

The community based survey included young people within the age group of 15-24 years and the facility based survey included health posts of the selected kebeles, nearby health centers and hospitals. Facility managers/heads and health care providers were sources of the data which were collected in the form of interview and focus group discussions. Using multistage sampling method, 845 youth were involved in the study and 821 youths responded to the questionnaires.

The results showed that the mean ($\pm$ SD) age of the respondents was 18.6 ($\pm$ 2.6) years and 650 (79.2%) were single. Three hundred ninety nine (48.7%) out of the total respondents are at primary school level while 11.2% of the respondents had no schooling. More than 76% of the respondents have never heard about youth friendly services until the study period. The major sources of information were school teachers, Anti AIDS clubs, media, HEWs, peers and so on. From those who have heard about the services, the majority (52.8%) of them had ever used the services and the most utilized youth friendly services were HCT counseling and condom supply. More males use the service than females; safe abortion service is not available in the youth friendly service unit though the demand is continuously increasing.

More than 28% of the respondents who used the youth friendly services reported that, they were requested to have a blood test before getting contraceptives and 12.4% say they were requested to get parental consent for any service.

The reasons for not using the services were 28% were due to lack of information, 20% do not know where to obtain and 20% due to inconvenient location of the youth friendly services.

The service rating showed that a great majority (88.8%) of the respondents rated the general youth friendly services as an average and more than average. On facility amenities, availability of clean and adequate space for youth friendly service was not a problem, there are private places for services like counseling and a great majority (70.4%) of them believed that the information shared with the service providers will be kept confidential.

The majority (95.2 %) of the young people reported that service providers are welcoming and friendly, and 92% reported that providers responded to their questions satisfactorily. However, 27.2% responded that they have fear or lack of confidentiality.

On sexual behavior and practice, more than one-third of the respondents were found to have boy/girlfriends. Out of these, the majority (82.1%) had sex with their partner; 34% reported that they were pregnant and 68% terminated their pregnancy.

The skills of service providers: most of them had been given training before they start giving the services. Nevertheless, it was indicated that the training didn't address key issues like long-term contraceptive, safe abortion and STI despite young people's demand for such services.

Factors that have been affecting the utilization of the youth friendly health services were:

- Lack of awareness on youth friendly services,
- Youth friendly services are not widely promoted with limited youth mobilization efforts including outreach activities to attract more youth,
- The place for service provision is not conducive (attractive), not readily accessible and is difficult to maintain privacy and ensure confidentiality of users,
- The youth friendly service providers are also engaged in other pressing assignment and shortage of supplies, drugs and IEC/BCC materials.

In conclusion, it was pointed out that youth friendly services were not widely known by the community. Very small proportions of the respondents had ever heard about youth friendly services and the overall quality of the youth friendly service was relatively weak, not properly organized and the utilization appeared to be low. However, any available resources were properly utilized.

Based on these findings the following recommendations were made:

- Popularize the youth friendly services to the community, youth and service providers including by organizing outreach awareness campaigns;
- Upgrade the skill of service providers;
- Allocate sufficient and separate space for youth friendly services; and make it more attractive and conducive to ensure privacy and confidentiality.

Presentation 91: "Assessment of the prevalence, associated risk factors and consequences of premarital sex among high school female students in Aleta Wondo town, Southern Ethiopia 2013," by Emebet T/tsadik.

In the introduction, it was mentioned that 15% of never married women in Ethiopia had premarital sexual intercourse (2011, EDHS). In addition, to risk of HIV/AIDS, it makes a woman to be at risk for teenage and unintended pregnancies, abortion and others sexually transmitted diseases. In Ethiopia, 1.5 % of adult were living with HIV/AIDS, 1.9 % were women and 1.0% men and this high HIV Prevalence associated with early age sexual initiation.

The objective of this study was to assess the prevalence, associated risk factors and consequences of premarital sex among high school female students in Aleta Wondo town, Southern Ethiopia, 2013. A cross sectional school based study was conducted and study populations were randomly selected among Aleta Wondo town high school female students (age of 15 and above). A total of 420 female students were included in the study with a response rate of 98.3%.

The results showed that among 394 female students who were never married, about 18% had premarital sexual intercourse. Out of those who had had premarital sexual intercourse, 11 (12.1%) of the women faced unwanted pregnancy; from this 82% of them had an abortion. Similarly, 19 (20.9%) them developed sign of sexual transmitted diseases such as swelling 1 (1.1%) and discharge 13 (14.3%) and ulcer 5(5.5%). The predictors of premarital sex were age [AOR (95% CI) = 1.43 (1.15, 1.77)]; smoking [AOR (95% CI) = 11.61 (3.58, 37.62)]; family resident [AOR (95% CI) = 2.12(1.09, 4.12)], this might be because most of the time those students attend their education in rent house in urban place. So, being free from parental

supervision and live alone may predispose them to have premarital sexual debut; have a boyfriend [AOR (95% CI)= 4.15(2.34,7.36)]; got to night club [AOR (95% CI)=2.92(1.12,7.65)]; and be unemployed mothers [AOR (95% CI)= 0.38(0.16,0.89)].

In conclusion and as recommendation the finding of this study showed that a significant number of female students had premarital sexual intercourse and suffered from its complications like unwanted pregnancy, abortion and STIs; and the sexual activity among youths is influenced by several factors operating at different level including rural family residence. The problem can be reduced by educating parents to have communication about sexual issue with their children and supervise their children during their adolescences age and making comprehensive sexual education mandatory at earlier age.

Questions raised: having a boy-friend is mentioned as predictor of premarital sex, is it not a given? Recommending for abstention wouldn't be feasible; couldn't there be any other recommendation? And what affordable and feasible FP is available for adolescents?

Dr. Agonafer Takalegne moderated the session on 'Malaria'. Abstracts No. 93, 94, 95, 96, 97, 98 and 99 are presented as follows.

Presentation 93: Malaria preventive behavior and its determinant factors among households in Sheko woreda, Bench Maji zone (SNNPR) using health belief model, by Mesfin Geremaw and et.al.

As an introduction the researcher stated that poor malaria preventive behavior is one of the obstacles for the success of malaria prevention and control program.

The general objective of this study was to assess malaria preventive behavior and its determinant factors among households living in Sheko woreda, Southwest Ethiopia.

A community based cross-sectional quantitative study supplemented by qualitative study was conducted from March 15 to 30/2011 in the study area. A total of 770 selected household heads were involved in the study and data was collected through face to face interview technique by trained data collectors.

The results showed that 40.8% of study participants were ITN users in the night before data collection. Of the total 35.9% of them sprayed their houses in the last six months. Malaria like illness was reported verbally from 18.7% of households and treatment were sought for 107 (74.3%) of households. After adjustment of confounders ITN use had association with ever had malaria, perceived susceptibility of malaria, perceived benefit of preventive actions and knowledge on malaria. Households IRS spray in last six months period was significantly associated with having separated bed room and type of house and as to treatment seeking behavior; it had association with having separated bed room, knowledge on malaria.

In conclusion this study had revealed that ITN use and IRS spray were low in the study area. Hence, it is recommended that existing health education efforts with new innovation and tangible evidence have to be strengthened and health education programs should focus messages that enhance perceived susceptibility of malaria, perceived benefit of preventive behaviors and attainment of comprehensive knowledge of malaria.

Presentation 94: Designing repeated cross-sectional blood survey revealed seasonality of malaria prevalence in low transmission setting of Butajira area, South-central Ethiopia, by Aduugna Woyessa and et. al.

In the background, it was explained that malaria is a major public health problem. Unbiased measurement of malaria prevalence needs informed- decision and epidemiological classification. However, malaria infection is seasonal mainly in low transmission settings. Previous studies designed to estimate malaria infection used single surveys during peak malaria transmission season.

The general objective of this study was to generate prospective community-based evidence on malaria infection and support in developing malaria prediction model. Specifically, to accurately estimate prevalence of malaria infection in low transmission settings of highland-fringe area, South-central Ethiopia.

Multi-stage sampling technique was used on 750 sampled households.

In conclusion, it was found out that seasonality of malaria in low transmission setting of highland-fringe area of Ethiopia. Malaria infection rose by about four fold during the peak transmission season of the second year and during 2009 and 2010 below average total rainfall.

It was recommended that despite the costly expense, repeated cross-sectional survey appears helpful in identifying parasite carriers to be targeted for elimination as transmission reduction approach. Future research targeted to estimating malaria infection could apply similar survey design was also recommended. The questions raised were cross-sectional study is recommended but why not sentinel sites used and why dominance of *P. vivax*?

It was responded that within the context of malaria elimination, pre-transmission season survey is essential. *P. vivax* is neglected epidemiologically in Ethiopia. Transmissibility is high regarding *P. vivax*. It requires low temperature and altitude issues are affecting.

The moderator recommended this paper to be presented in the forth coming world malaria day.

Presentation 95: Climate variability and malaria transmission in Fogera district, Amhara Region, Ethiopia, 2003-2011, by Addisu Workneh.

As introduction it was stated that malaria transmission rates have been linked to temperature and precipitation; factors that will be affected by increasing climate variability and global climate change. The researcher compared rainfall and temperature patterns with malaria cases as the initial step in developing a malaria forecasting system for Amhara Region.

Climate and malaria data were analyzed from January 2003-December 2011 in Fogera district of Amhara Region and compared monthly rainfall and temperature data with the number of confirmed malaria cases.

The results showed that 104,716 confirmed malaria cases were identified, which were treated in the district between 2003-2011 with the monthly cases range from 98–5038. The annual prevalence rate was 104 per 1000. Annual average rainfall was 1268 mm, and there were between four and six months with rainfall that exceeded 80 mm annually.

There was a trend of associating months with rainfall above 80 mm and higher rates of confirmed malaria cases in seven of the nine years of the study period. Average monthly temperature throughout the nine years period ranged from 18°C to 28°C except one month. There was no association between temperature and confirmed malaria cases.

It was concluded that malaria still constitutes a serious public health problem in the study area. Monthly precipitation greater than 80 mm was associated with increased malaria transmission rates in the district, and temperature between 18°C and 28°C was not a limiting factor for malaria transmission. Hence, continued development of climate prediction models to help forecast and control malaria outbreaks in Amhara Region was recommended.

Presentation 96: External quality assessment of malaria microscopy in Hawassa town health facilities, Southern Ethiopia, by Misganaw Birhaneselassie.

The objective of this study was to assess the quality of malaria microscopy among health facilities in Hawassa town.

A cross-sectional was conducted in Hawassa city health facility laboratories from November 2012 to January 2013. Validated panel malaria slides were distributed to health facilities accompanied with a questionnaire that assessed factors related to malaria microscopy improvement. A total of 51 laboratory professionals in 10 health facilities were surveyed.

The results showed that of the 306 malaria slides examined only 54% of the examinations reported correctly. The most common errors were reporting negative for positive slide 39/83 (47%), species identification error 29/83 (18%). In identifying both *P.falciparum* and *P.vivax* species 18% of participants made correct diagnosis. In Plasmodium negative samples 45 (88.2%) of participants scored (no parasites observed) correctly. Among the participants 53% had never participated in a formal training on malaria microscopy. And among those who did more than half were trained earlier than 2008. All of the participants reported of using tap water for the preparation of working Giemsa's solution.

In conclusion this study revealed a poor quality of malaria microscopy in the study area. Therefore, responsible bodies are required to improve quality of malaria microscopy by providing regular refreshment training for laboratory professionals and further large scale survey are recommended.

The questions addressed: Was there a association of lab. technicians on CB on microscopy? Association was tried in the analysis but was statistically insignificant. What is your comment on estimating parasite load versus EHNRI using different methods such as density? The density of the parasite was not done and not reported by many health facilities. There is no standard but usually it is used for qualitative study.

Presentation 97: Malaria transmission intensity in Ethiopia and the challenges of maintaining the gains during National Malaria Control Scale-up Program, by Muluken Hailu.

As an introduction, it was explained that Ethiopia has undertaken malaria intervention up scaling since 2005, remarkable achievement since then.

The aim of this paper was to review journals and reliable periodicals that addressed the changes in incidence or parasite prevalence of malaria in Ethiopia in connection to the GMCE guideline.

As introduction the researcher noted that globally, in 2010, an estimated 216 million cases and 655,000 deaths were recorded, of which Africa regions contribute the lion share of the reported 81 % of cases and 91 % of deaths. Malaria, apart from the direct health consequences, it is contributing to the impediments to economic development in tropical countries slowing of economic growth rate by 1.3% annually (Govella, 2010) and costing 2 billion per year (WHO, 2011). In 1999 the Roll Back Malaria (RBM) was established as a project to coordinate GMEP actions plans against malaria. The objective of RBM was to reduce malaria burden by half by 2010. RBM stated four plan of action, namely; to provide early diagnosis and treatment of malaria, to implement preventive measures (like vector control activities), controlling epidemics and promotion of timely research (WHO 2006). RBM initiated the adoption of ACT, the large scale deployment of ITNs and indoor spraying as mosquito control measures. RBM has stimulated funding agencies to increase their support from US\$100 million available in 2003 to US\$1.5 billion obtained in 2010 (Eisele and Steketee, 2011).

The annual burden of malaria transmission in Ethiopia is estimated to be about 5-6 million clinical cases and thousands of deaths (Graves, 2009, Yeshiwondim *et al* 2009), and malaria transmission is unstable and seasonal ranging in transmission (Sept – Nov) and (April and May). Some low- land areas with lakes and swamps, experience perennial malaria transmission (Chala, 2007). Forty two species of Anopheline mosquitoes are known to exist in Ethiopia; *A.gambiae* s.s. and *A.arabiensis* are responsible for the cause of unstable malaria and most epidemic conditions (Tulu, 1993). *A.funestus* and *A.pharoensis* have secondary importance.

Concerning malaria control efforts in Ethiopia, the researcher pointed out that the scale up intervention in Ethiopia began in 2005. Since then:

- 42 million ITNs were distributed and 17.8 million replacements distributed.
 - 4.2 million houses were applied with IRS,
 - more than 48 million ACT regimen drug,
 - over US\$ 200 million was obtained from Global Fund, World Bank, DFID and Carter ,
- In addition, he stated that:
- In three years time (2009-2011) a total 30,900,000 RDTs distributed.
 - In two years' time, since the scale up malaria declines in children < 5, 73% for in-patient malaria cases, 62% for in-patient malaria deaths, and 85% for out-patient laboratory-confirmed malaria.
 - Altitudes <2,000m results a malaria(FDRE-MOH 2012): MIS (2007) using microscopic blood-smear test prevalence of 0.9% and MIS 2011 results 1.3%, showed a small increase in malaria prevalence.
 - Altitudes >2,000m:-very little malaria (0.1% *P. vivax*) detected. As to the WHO (2011) a total of 5,420,111 suspected malaria cases, 4,068,764 malaria confirmed cases (gives 75%) and 1581 malaria attributable deaths.

In conclusion, the researcher stressed the need to strengthen achievements and curb challenges through:

- Establishing mechanism to mobilize domestic funding and necessary assistance from international and bilateral partners
- Supporting health system to achieve or sustain 80% or more coverage of ITNs and IRS in the remaining years,
- Improving community awareness about ITNs, IRS and enhance treatment-seeking behavior for individuals with fever.
- Improving health services particularly the lowlands on surveillance and data management.

Presentation 98: Combining IRS and LLINs for Malaria Prevention: A Cluster Randomized Controlled Trial in Ethiopia (2013-2016), by Wakgari Deressa and et.al.

As an introduction it was stated that LLINs and IRS are the two main strategies currently used for malaria prevention in Ethiopia and yet no evidence that either one or the two in combination is better than the other to interrupt malaria transmission. The added value of IRS when combined with LLINs vs. the use of LLINs or IRS alone is unknown.

The primary objective of the study is to examine if IRS + LLINs provide added protection against malaria compared with either IRS or LLINs alone. The second objective was to assess if the IRS+LLIN or LLIN/IRS alone interventions change the age distribution of malaria patients and to assess whether IRS+LLINs reduces anemia and parasite prevalence compared with LLIN/IRS alone.

The health economic study objective was to estimate the costs of LLINs/IRS alone or IRS+LLINs, compared to current standard practice in the study settings, and to calculate incremental costs-, incremental effects and cost-effectiveness of the intervention arms.

The entomological study objective was to assess whether IRS+LLINs reduces human biting rates, resting density, longevity, sporozoite rates, and entomological inoculation rates (EIR) inside houses when compared with IRS/LLIN alone and the secondary objectives are to assess if and how the interventions alter mosquito behavior and insecticide resistance.

The study design was a cluster randomized controlled trial, with four “arms” (factorial design): IRS+LLINs, LLINs alone, IRS alone, and Control (routine practice).

The intervention sought was the distribution of Long-lasting insecticidal nets (LLINs) and IRS with insecticide bendiocarb or propoxur.

The primary outcome was the detection of malaria parasites (*P. falciparum* or *P. vivax*) by RDTs and microscopic blood slide examination.

The specific outcomes include:

- Incidence of malaria both in intervention and control villages
- Proportion of malaria infections attributable to the different Plasmodium species
- Prevalence of anemia both in intervention and control villages
- Entomological outcome measures such as EIR for intervention and control villages
- Total cost of the interventions
- Number of malaria cases averted and death prevented
- Disability Adjusted Life Years (DALY) gained.

Presentation 99: “Detection of a substantial number of sub-microscopic *P. falciparum* infections by PCR: a potential threat to malaria control and diagnosis in Ethiopia,” by Lemu Golassa.

The researcher started the presentation with touchy and sensitive issues in the control of malaria. In the world of malaria research, new paradigm of thinking has come into being! From Malaria control (reduction in morbidity/mortality to Malaria elimination (clinical + sub-clinical cases). What does this move require? ACD (active case detection)! PCD (ACD + passive case detection). What reliable device(s) help such agenda a realistic? Microscope, RDT and PCR. How helpful are these diagnostic methods to help us move from malaria control to elimination??

Outcome of infections with Plasmodium spp.

Plasmodial infections can be:

- i) Clinical (symptomatic): microscopically detectable • Infected subject actively seek medical care for clinical resolution, (RDT, microscopy suffice). PCD
- ii) Sub-clinical (asymptomatic): sub-microscopic! • Infected subjects usually don't seek medical care! How to address these groups? Active Case Detection, (ACD). PCR

In conclusion asymptomatic, low-density malaria infection was common in the study area. The inadequate sensitivity of microscopy and RDT would undoubtedly affect malaria control efforts, making reduction of transmission more difficult. RDT and microscopy-based prevalence studies and subsequent reports of reduction in malaria incidence underestimate the true pictures of *P. falciparum* infections in the community and no association between bed net use and asymptomatic carriage. As a recommendation the role of sub-microscopic parasite carriage in human-mosquito transmission need to be determined.

Question: how is specificity of CPR—reliability? The researcher responded that it is reliable and it is an opportunity.

Finally, the audience raised general questions and commented as follows:

Is eradication achievable? It was responded that Sir Lanka has achieved but able to get epidemics.

Comments: CPR is not a threat but an opportunity. Temperature affects the vector and the parasite. In relation to eradication, agricultural development coming in and upset the epidemiology technology that will ship and interfere in the malaria eradication. The meeting recommended that this issue should be further discussed in the future by the malaria community.

Dr. Alemayehu Mekonnen moderated the session on “Maternal Health”. Abstracts No. 100, 101, 102, 103 and 104 are presented as follows.

Presentation 100: “Birth Preparedness and Complication Readiness among child bearing age women in Goba Woreda, Southeast Ethiopia,” by Desalegn Markos and et.al.

As an introduction, some definitions and explanations were cited, such as: birth preparedness and complication readiness is the process of planning for normal birth and anticipating the actions needed in case of an emergency. It is also a strategy to promote the timely use of skilled maternal care, especially during childbirth, based on the theory that preparing for childbirth reduces delays in obtaining this care. It is

difficult to predict which pregnancy, delivery or post delivery period will experience complications; hence birth preparedness and complication readiness plan is mandatory with the notion of every pregnancy is risk. This study was aimed at assessing birth preparation and complication readiness among women of child bearing age in Goba Woreda, Oromia region, Ethiopia. The Community based cross-sectional study design supplemented by qualitative methods was employed. Study population for quantitative were sampled women who had given birth in the last 12 months, irrespective of birth outcome. For qualitative study women who had given birth in the last 12 months for FGD and Traditional Birth Attendants in each kebeles for in-depth interview. The sample size was 580 and the sampling procedure for the quantitative part was multistage sampling technique and for qualitative study convenient sampling for focus group discussant who have given birth in the last 12 months and purposive sampling to select traditional birth attendants in each of the 9 kebeles.

The results showed that 480 (85.4%) study subjects were not knowledgeable and 82 (14.6%) participants were knowledgeable about birth preparedness and complication readiness.

Knowledge of respondents about preparation for birth and its complication, Goba woreda, Oromia region, Ethiopia, April, 2013.

Birth preparedness and complication readiness only 168 (29.9%) were prepared for birth and its complication in their last pregnancy and 394 (70.1%) study subjects were not prepared.

Practices of respondents on preparation for birth/complication, Goba woreda, Oromia region, Ethiopia, April, 2013.

Majority of FGD discussant mentioned that they have prepared butter, flour, clothes for the new born and little money which they may use it for transportation and other need. On the other hand, almost all discussant put forwarded the absence of any plan on transportation, and especially blood donor.

One participant stated that, *"All of us; what we thought and wanted is as we deliver normally, so that we did not think about blood donor and other serious issue. By the way, how should we suppose to plan very bad situation on our self and prepare blood donor as well as whom to inform in case of emergency? This is what I think."*

In conclusion only very small numbers of respondents were prepared for birth and its complication in their last pregnancy. Place of residence, educational status, ANC follow up, knowledge status during pregnancy and postpartum period are found to be the independent predictors of birth preparedness and complication readiness. Hence, it is recommended that

- Oromia Region Health Bureau, Bale zone health office, Goba woreda health office as well as other partner organizations that are working in areas of maternal health should work hard to improve birth preparedness and complication readiness of women.
- Health professionals during ANC should place further emphasis on birth preparedness and complication readiness to improve access to skilled and emergency obstetric care.
- Researcher/s should conduct further study on quality of ANC in focus of birth preparedness and complication readiness.

Questions and responses:

1. Knowledge is seen using four elements; do you think respondents mentioned four areas are knowledgeable? No, it is not enough but better operationalize, literatures have been revised.
2. Education level is considered, why not occupation and partner's occupation? If we try to see occupation, it will not come out as independent predictor.

Presentation 101: “Respectful and non-abusive care during childbirth in Addis Ababa, Ethiopia: a case from Saint Paul’s Hospital Millennium Medical College and three Catchment Health Center”, by Anteneh Asefa and et.al.

In the introduction section, some relevant findings were cited from different sources and to mention a few: improving maternal health is currently a pressing concern for the international community and mainly LMICs.

Lack of respectful and non-abusive care at birth may encompass many points along a continuum that spans dignified, patient centered care, non-dignified care, and overtly abusive maternal care. Disrespect and abuse (D&A) are often multi-factorial and may be perceived differently and sometimes normalized depending on the specific setting. Reports of D and A in facility-based childbirth across a range of birth care settings in low, middle and high income countries and proposed categories of disrespect and abuse draw on human rights and ethics principles, and are intended to help synthesize and organize the broad range of manifestations of D and A.

The general objective of this study was to assess the level of disrespect and abuse during childbirth in SPHMMC, and selected three catchment health centers with the following specific objectives:

- To identify the types of disrespect and abuse experienced by laboring mothers.
- To assess women’s self report (perception) of disrespect and abuse during childbirth, and
- To identify provider and client related factors associated with disrespect and abuse during childbirth.

The study design was facility based cross sectional quantitative study with selected pregnant women giving birth in the labor wards (only women with non-assisted and assisted vaginal birth) and all health professionals (Nurses, midwives and physicians) working in the labor wards of SPHMMC and Addis Ketema, Kolfe and Selam Health Centers emergency obstetrics OPD of SPHMMC as study units.

The final sample size was 191 and all health providers providing childbirth service were included in the study (n=57). Samples were proportionately allocated to health facilities and continuous interview of mothers was made until the required sample has met.

Obstetric and health service related characteristics of respondents found to be nearly half (48%) had gravida 2-3, 95.4% had at least one ANC visit during their last pregnancy, 43.3% had previous history of institutional delivery and nearly half (48%) of mothers reported of being assisted by more than 2 service providers during childbirth.

32.9% of mothers have reported that they have faced at least one non-respectful and abusive practice from the six indicators in the category. 55.5% of mothers have reported that they have faced at least four non-respectful and abusive practices from the nine indicators in the category.

Disrespect and abuse was identified to be practiced in 96.5% of the deliveries surveyed (92.9% in health centers and 100% in SPHMMC). But, only 12.7% of women think they were disrespected and/or abused during childbirth.

Factors associated with D and A were non-involved service provider had access to see the mother during childbirth versus non-involved service provider had no access to see the mother during childbirth (AOR=0.03; 95%CI:0.02, 0.28), stay in labor for more than 12 hours versus less than 12 hours (AOR=4.00; 95%CI:1.05, 15.1) and primary education versus no education (AOR=0.20; 95%CI:0.03, 0.83).

A total of 57 health professionals completed the questionnaire (20 male and 37 female) and 43.9% were midwives by profession and 77.2% had experience of less than six years by their profession.

Perception of service providers towards work related characteristics:

- 23.9% reported very poor management support they got from their health facility,
- 5.6% are very unhappy in the provision of childbirth services,
- 57.1% reported disrespected or abused in their work,
- 58.2% wanted to work for their facility in the future, and

- 79.6% agreed that lack of respectful care is a factor which discourages pregnant women from coming to health facilities for delivery.

In conclusion Majority of women in this study have faced non-respectful care during childbirth. Hence, it was recommended that

- Health facilities to work towards ensuring confidential and private service delivery during childbirth, to provide appropriate and adequate management support and motivation to service providers and to look for opportunities to provide humanized care during childbirth.
- Service providers should provide non-discriminatory and non-prejudiced services to clients regardless of mothers socio-demographic and economic background, need to be receptive and responsive to mothers questions and concerns during childbirth, and to use performance standards for respectful and non-abusive care during childbirth, and
- All stakeholders to work towards combating normalization of disrespect and abuse.

The questions raised, comments and responses made are presented as follows:

1. Why did you exclude mothers with Cesarean Section? Because CS do not face D and A.
2. Data collectors were health professionals, who checked their specification? How did you manage confidentiality?
HF checked their specification and there was no problem. Green gown preparation addressed confidentiality.
3. Do you measure the central consistency of tools? The tool is very new, not yet tested
4. Is it possible to generalize the findings to other populations? We cannot generalize our findings.

Presentation 102: Intention to use Long Acting and Permanent Contraceptive Methods and factors affecting it among married women in Adigrat town, Tigray, Ethiopia, by Alem Gebremariam and et.al.

In the background it was explained that Modern Contraceptives (MC) can be grouped into 2: Short term and Long Acting and Permanent Methods (LAPMs: Implant, IUD, Vasectomy and tubal ligation). LAPMs are convenient for users, cost-effective for programs overtime and contribute to reaching national and international health goals.

The EMOH has planned and is working on the provision of all FP methods, especially LAPMs. Utilization and intention to use is very low especially LAPMs: The CPR is 29 % with Injectable (21%), Implant (3.4%).

This study assessed the magnitude of intention to use LAPMs and factors affecting it among married women in the reproductive age Adigrat town, Eastern zone of Tigray, Northern Ethiopia.

The Study design was a community based cross sectional study complemented with a qualitative method and the study populations were all currently married women aged 15-49 years living in the randomly selected Kebeles. Using systematic random sampling method the sample size was 594. Face-to-face interview was used for the quantitative data, 4 FGD sessions with currently married women and men, 6 IDI with FP providers were carried out to see the perceptions and choice of clients towards LAPMs.

The quantitative results showed that the CPR was 303 (51.3%), dominated by Depo-Provera (68.3%), the prevalence of LAPMs use was 59 (19.5%), almost all (94.7%) knew at least one method of LAPMs, the least known methods were tubal ligation (52.5%) and vasectomy (23.7%) and 26.2% perceived that LAPMs could harm the womb. Intention to use LAPMs was 48.4% (95% CI= 44.1, 52.7). The most preferred method was implants 184 (71.3%). The intention to use permanent methods was 12 (4.7%), the Intention to use LAPMs was less among women who perceived having poor support from their husbands (AOR=0.2, 95% CI=0.09, 0.45) and those who perceive LAPMs are harmful for the womb (AOR=0.24, 95% CI=0.14, 0.41). The main reasons for not intending to use LAPMs were fear of side effect (34.5%) and fear of infertility after use (21.1%). The intention to use LAPMs was higher among women who knew at least one of LAPMs (AOR=4.7, 95% CI=1.58, 14.01) and women who did not want to have birth within the next 2 years (AOR=1.9, 95% CI=1.22, 3.13).

The qualitative findings showed that most of the participants in the FGDs had no knowledge of permanent contraceptives, concerns about LAPMs were still evident, especially in relation to implants and IUCD and fear of infertility after use, insertion and removal procedures, and effect on physical activities. One FGD participants said that *“After using IUD you may not give birth even it is said that it can stop birth. It can make you sterile. Implant has pain and may be difficult to remove it if it is absorbed (covered) by fat. It can make the injected hand numb and you can’t rise and carry heavy things through that hand.”*(37 years old woman, illiterate, para 9, Depo-Provera user).

It was concluded that due to the various reasons mentioned above the magnitude of intention to use LAPMs is low (48.4%). Therefore, it was recommended that The FMOH, RHB and others should continue the promotion of LAPMs. The woreda health office should design educational programs that promote and reduce barriers to MC use especially LAPMs. FP providers should counsel properly on all of the FP methods. FP services should be relevant for husbands to participate and teams of health care workers should be trained

The following questions were presented to the researcher and he had responded accordingly.

1. Why you didn’t assess the skill of the health providers? Knowledge is assessed but we recommended deep skill investigation.
2. Is there still an additional training needed? The researchers have recommended having more than one provider in a facility.
3. About 54% were already using, do you think this affect the intention? Yes CPR=54% but we included correct use in a multivariate analysis but did not come out.

Presentation 103: Assessment of utilization of maternal health care services in two project zones of Amhara National Regional State, December 2012, by Tesfa Demlew, and et. al.

As an introduction the researcher explained that Maternal and neonatal mortality is one of public health concerns in Ethiopia. MDGs 4 and 5 not yet achieved, nevertheless the service coverage which is expanding through HEP and HEWs is making a difference. EPHA, Packard Foundation and the FMOH are jointly implementing RH/FP project in North and South Wollo zones of Amhara Region, Ethiopia.

The aim of this study was to assess and determine the underlying factors that affect utilization of the ongoing maternal health services, both from clients and service providers’ perspectives.

A cross-sectional quantitative study design triangulated with qualitative methods was conducted at the community and facility levels. Health posts, health centers and hospitals within the study area were included. The study populations were women of reproductive age (15-49) who were ever pregnant during the last two years preceding the survey. For the qualitative part, facility managers/heads, health care providers were engaged.

Results, utilization of services:

- 83% had visited health facilities (HF) for ANC services during their last pregnancy,
- 58.9% were attended by health professionals (Doctor/ HO/Nurse/Midwife), 38.1% by HEWs/Auxiliary midwife,
- 3.4% were referred to other health facility, 96.2% went to the referred facility.

Decision to attend ANC: 60% of the women can decide to attend ANC by themselves, 33.7% both husbands and wives, 7.6% husbands were the sole decision makers.

The main reasons for not attending ANC during their last pregnancy period were: they were healthy and did not need the service, too busy and had no information about the services.

Delivery: 2/3 delivered at home, 32.9% institutional deliveries. The main reasons for home delivery were: availability of close attendants at home (40.7%), health facility is too far (16.6 %) and transport to health facilities not available (8.4%).

PNC: 32.2% (495) women were visited by health workers after delivery and 65.5% (1021) visited health facilities after delivery.

Major factors affecting service utilization were women's level of education, occupation, partner's occupation and prior knowledge of FP/RH services and residence.

Quality of all types of services is affected by skill of the service providers, handling of clients and availability of supplies.

Finally, the presenter made the following recommendations:

- Build on the gains in MNCH services utilization,
- Strengthen awareness at community level on ANC, delivery and PNC,
- Engage the health army,
- Focus more on women who cannot read and write who live in the rural areas and out of wedlock,
- Improve the skills of service providers mainly that of HEWs and enable them to handle safe delivery

Questions and responses:

1. How did you evaluate the skills of the health providers? Response: we didn't conclude about the skills of health workers but we did it in the qualitative part.
2. Do we have auxiliary workers? Response: The Amhara Regional State has certificate level midwives not auxiliary midwives.
3. Why is that cultural barriers were not considered? Response: cultural factors were not asked but few respondents have mentioned some cultural factors.

Presentation 104: Making dramatic choices: Women's experiences on delivery care in northern Ethiopia: A Grounded Theory study, by Tesfaye Gebregzabher.

In the background it was explained that promoting maternal health and to prevent unnecessary suffering and deaths, the right to health approach (women's reproductive rights) is the most crucial intervention.

The objective of this study was to explore women's experiences and perceptions regarding delivery care in the Northern Region of Tigray, Ethiopia.

Participants: Women who had given birth in the last three years (regardless of their current pregnancy status) were invited to take part in focus group discussions (FGDs). Fifty-one women participated in the FGDs; 27 had delivered at home and 24 at a health institution and their age ranged from 15 to 40 years. The sampling technique was purposive sampling.

The results:

Aiming for safer deliveries

- It represents how women in Tigray acknowledged the risks associated with pregnancy and delivery.

Awareness of risks of delivery

- Women also recognized clearly, the risks associated with delivery, excessive bleeding, prolonged labor or obstructed labor.

Quotes of women during FGDs

'If it is at home, it is a problem, nobody will notice if I bleed or if other complications have, they just tell you to keep quiet. I am afraid of losing blood and narrow whenever conditions seem to be safe I choose to give birth at home with the help of St. Mary, when there seems to be any danger because I believe there is a remedy, I visit health facility, so there is no conflict between God and Hikiminaa, medicine' FGD3pelvis, when I give birth at home' FGD5.

Embedded in Tradition (Faith+elderly)

Faith played a strong role during delivery. The participants described how they trusted God, and especially Saint Mary, for a safe delivery. *'My grandparents wanted me to wait a little longer at home. They told me to wait and I gave birth incidentally. Generally elderly women influence us to stay at home'.*

TBAs as gate openers

Women viewed the role of TBAs favourably, and appreciated the care provided by TBAs. *“I was assisted by my mother when I gave birth, but TBAs used to hold gloves, cotton and towels. They are good at giving care and encourage women during birth”.*

Women appreciated the resources provided at the health facilities. They valued the information offered by the health workers. Women criticized health facilities for very long waiting times, and health workers for not being available during nights or weekends, and offering incomplete health services.

Uncertain quality of care *‘When I gave birth to my second child I went to the health centre at night. I was bleeding and they did not refer me to hospital immediately. I spent the night there. I had severe pain, I was suffering and exhausted in a room alone, but they were watching me through the window. In between, if I die, what happens? When the grandparents and other neighbors observe, how do they feel? They would decide to stay at home; they would prefer to give birth at home. Then I went to the hospital at three o’clock in the morning. They injected me with a medicine and I gave birth immediately’.* (Woman who delivered at health facility - FGD 4)

Transportation barriers: Not accurately predict the exact time of their delivery. *‘I wanted to give birth at HF, but I had no one to bring me here. I could not find a car to bring me here. This is not a place like in town where you can immediately make a phone call and obtain a vehicle for transport; you have to call on a lot of people to carry you on a stretcher and take you to the HF’.* (Woman who delivered at home - FGD 2)

HEWs as gate-openers *‘HEWs have a good reputation, they consider me as their sister, give me good care, they identify which specific locality I come from, they receive me with a smiling face’* cxxx (Woman who delivered at health facility - FGD4).

In conclusion, although women did not see any conflict between traditional and institutional maternal care, the gap between the models remained and revealed a need to reconcile differing views among the caregivers. The HEP would benefit from an approach that incorporates all the actors involved in maternal care, at institutional, community and family levels alike.

Reconsideration is required of the role of TBAs, and a well-designed, community-inclusive, coordinated and feasible referral system should be maintained.

Comments made and questions raised were:

- It is not a first study, there are published studies. The comment is well taken but the research group searched articles but couldn’t find any.
- Comment on what types you used to analyze in a Grounded Theory. We used comparative analysis.
- Are there themes left out from your qualitative emerging themes?
Why not in depth interview rather than FGD? We limited ourselves due to time. We use one of the five purposive sampling based on our interest.
- What was your positionality? You were a data collector as a male? How was the trustworthiness of your data? Why did you use Snowball method? How did you reach confident saturation? Is time an influence on women experience to decide? The presenter could not go one by one due to time limitation but promised to address them.

Professor Getnet Mitike moderated the session on ‘Child Health’. Abstract number 106, 107, 108, and 110 are presented as follows.

Presentation 106: Assessment of parents/care givers malaria knowledge, home management and factors associated with practice of prevention towards under five children in Damot Gale woreda, Wolayta zone, Ethiopia, by Aklilu Abrham and et.al.

Each year, 300-500 million malaria infections, and 1.5 to 3 million deaths occur due to malaria worldwide, of which 90% occurring in sub Saharan Africa mostly in young children. It kills a child every 30 seconds anywhere in the world (WHO, RBM, 2005). Out of malaria deaths occurred in 2010, 91% were in Africa and 86 % involved children under-five years of age.

Ethiopia is one of the most malaria-epidemic prone countries in Africa: up to 20% of U5 deaths by malaria and most children die from malaria at home without receiving adequate therapy

The general objective of this study was to assessment of parents/care givers malaria knowledge, home management and factors associated with practice of prevention towards under five children in Damot Gale woreda, Wolayta zone, Ethiopia.

The study design was community based cross-sectional study. A total of 419 samples were taken and parents/care takers of under five children were taken as study units.

The data collection: Parents were interviewed for knowledge and practice aspect of malaria, malaria prevention, and home managements axillary temperature was taken from every sick child in selected households and when Temp $>37.5^{\circ}\text{C}$, blood test was done by using RDTs.

The results related to the knowledge about malaria: 396 (94.5%) had heard about malaria, three fourth of respondents knew that malaria could be transmitted from person to person, of whom 95% correctly related it with the bite of infective mosquito and 88% responded that malaria was a preventable disease.

Regarding knowledge of malaria prevention methods: 322 (92%) knew source reduction and bed net use.

Concerning practice of prevention: 293 (83.7%) practiced source reduction and 239 (63.1%) have owned bed nets.

Regarding bed net possession and utilization: 378 (95.5%) of respondents heard about bed net, 239 (63.1%) had bed net in their families and of whom 174 (73.4%) possessed one, 51 (21.5%) had two and 12 (5%) had possessed three ITNs.

Concerning purpose of utilization: 97 (40.6%) were using it to prevent mosquito naissance, and 137 (57.3%) to prevent malaria. During survey time, 209 (87.1%) children slept under a bed net prior night (reported utilization). Number of under-five children who had slept under LLINs the prior night during data collection in this site was 209(87.1%) which is higher than national references(in areas $<2000\text{m}$, 38.2%) and also regional average of 42.3% in SNNPR.(MIS 2011).

Factors associated with practice of malaria prevention: Role of being mother (AOR=5.5, 95%CI=1.2-25.8), knowledge of method of malaria prevention (AOR=44.3, 95% CI=11.5-171), treatment seeking behavior (AOR=18.9, 95%CI=5.3-67.5) had shown significant association and knowledge towards anti-malarial treatments (name 2 drugs AOR=9.9(3.1-32.4), and name 3 drugs AOR=5.610(1.4-23.2).

Home management of malaria: 38 (9.1%) children developed malaria, 32 (91.4%) managed at home with modern anti-malarial drugs, majority 27 (84.4%) of children started anti-malarial treatment after 24 hr. while only 5(15.6%) started treatment within 24 hrs and but 29 (90.63%) of respondents had access within 30 minutes.

Regarding treatment seeking behavior of respondents, more than three fourth (78.12%) got treatment from health facilities first, and then managed at home. From those who seek treatment at home first and only at home 7(21.8%), 6/7 didn't recover

In conclusion bed net possession was found to be low (63.1%), fever/malaria prevalence in children was 9.1% which is less than national average of 17%, treatment seeking from health institution within 24 hour is very low (15%). And almost all of the children who were treated only at home or home first didn't recover. So, treating febrile children only at home or home first was not effective.

Finally the researcher recommended that bed net possession should be enhanced from 63.1% to more than 80% working strongly with HEWs and health development army, ITN utilization rate in U5 children was 87.1%, this is a good practice, so it should be appreciated and enhanced to 100% and increasing the community's knowledge and practice towards prompt access to modern anti-malarial treatment within 24 hours is required.

The questions raised and the responses are as follows:

- Draw back your RDT tests: positivity and negativity? RDTs are non sensitive and it is a challenge but for this data the latest version used.

- How do determine febrileness (children with non-febrile condition)? It was not difficult; it depends on mothers' response.
- The question of confounding factors was asked and responded well.

Presentation 107: Isolation and Antibiotic Susceptibility Patterns of *Shigella* and *Salmonella* Among <5 Children with Acute Diarrhea, and Maternal KAP towards Childhood Diarrhea, attending at selected Public Health Facilities in Addis Ababa, Ethiopia, by Yeshwondm Mamuye.

As background diarrhea is the third most common cause of death among children <5 years of age worldwide: Globally 21% of all deaths and 42% occurred in the African region. In Ethiopia, about 230,000 deaths occur in children below five years of age and *Shigellosis* and *Salmonellosis* are among the common causes of morbidity and mortality.

The objective of this study was to determine the prevalence and antibiotic susceptibility patterns of *Shigella* and *Salmonella* among children with acute diarrhea, and describe maternal KAPs towards childhood diarrheal diseases.

The study was conducted at outpatient pediatric departments of St. Paul's hospital Millennium Medical College, Selam and Addis ketema health centers. All children with acute diarrhea and visits the selected health institution during the study period were used for the study. A total of 253 (115 male and 138 female) children were examined for the presence of enteric bacterial pathogen.

Laboratory Method:

- Primarily overnight incubation was performed simultaneously at Selenite F broth enrichment media and MAC.
- MacConkey agar, SSA and Deoxycholate citrate agar (DCA) were used for primary isolation media.
- The susceptibility testing was carried out using disc diffusion method on Mueller Hinton agar.

The results were a total of 33 (13.04%) *Shigella* and *Salmonella* spp. were isolated among 253 patient presented with acute diarrhea, 9.1% for *Shigella* species, and 3.95% for *Salmonella* species and 34% (86/253) of the patients were infected by one or more parasites. Isolation rates of *Shigella* spp was (9.1%) and 3.9% *Salmonella* spp.

Resistance Pattern: 87% *Shigella* species was multiple resistances (resistance for two up to six commonly used antibiotics); 95.7%, 91.4% and 52.5% of the *Shigella* isolates were resistant to AMP, AUG and SXT, respectively and 4% of the *Shigella* isolates were resistant to CIP. Resistance rate of *Salmonella* species were high for AMP, AUG, SXT and C respectively, 80.0%, 80.0%, 60.0%, and 40.0%.

Majority of the caretakers, 88.5%, had agreed breast milk were mentioned as effective means to prevent childhood diarrhea. *Shigella* species was significantly isolated ($P = 0.027$, and 0.011) from patients whose parents are merchant and housewife respectively than government employers. The prevalence of *Salmonella* was significantly isolated among children from raw meat user families (AOR= 12.3, 95% CI= 2.8-53.5), $P\text{-value}=0.001$ ($p>0.05$).

The researcher had concluded that isolation of high frequency of multidrug resistant *Shigella* and *Salmonella* from children in the study area is an alarming, usage of raw meat facilitates enteropathogenic infection and improving the knowledge, attitude, and practice level with improving hygienic conditions are public health priorities.

Based on these the following recommendations are forwarded: There is a need of continuous surveillance of the prevalence and antibiotic susceptibility pattern of diarrheal bacterial isolates and researches to be done on isolations of other acute diarrhea causing enteric pathogens and improving health education, together with more judicious use of antimicrobials could preserve antimicrobial efficacy and substantially reduce diarrheal illness.

The question raised was how did you identify the normal and pathogenic *E. coli*? We focused on the pathogenic. This is to see the patterns of resistance not addressing the pathogenic type.

Presentation 108: Effect of Residence for Health Care Seeking Behavior for Common Childhood Illness in Northwest Ethiopia, 2013: A Community Based Comparative Cross – Sectional Study, by Yalemzewod Assefa Gelawand et.al.

HSB of mother is a response for their ill child to reduce the severity, complication or even death after she recognized the illness. Early HSB of mothers' have a potential to reduce child mortality particularly in developing countries like Ethiopia, where common childhood illnesses are a major PH problem. Health care seeking was operationally defined as those mothers' having ill U5 child (common childhood illness) within the past two weeks and visit HF (HP, HC or Hospital) to treat them.

The general objective of this study was to assess the health care seeking behavior and associated factors for common childhood illnesses among mothers' living in urban and rural areas in Burie District, Northwest Ethiopia.

The study design was a community based comparative cross-sectional study and the source population were all mothers' having under five children in the study area.

The sample size was calculated to be 786 (262:524) but after census 886 (294:592) ill under five children were found of which 827 (274:553) all this mothers' participated (93.3% response rate). Multi – stage sampling techniques was used to select the respondents.

The results showed that 44.5% caregivers (Urban= 42.7%, Rural= 48.3%) had good knowledge on common childhood illness (acute respiratory infection, fever, and diarrhea). HCs/Hospitals were the dominant place where mothers' seek health care (79.1%). Time of seeking health care after the perception of illness was significantly difference; 26.8% (urban = 41.4% and rural= 19%) mothers' seek health care on the first day perceived onset of illness.

The result of this study showed that: Mother's health care seeking for common childhood illness was found to be high. Health care seeking behaviors for common childhood illness were different in urban and rural dwellers. Urban mothers' seek health care for common childhood illness more than rural mothers. Factors associated with mothers health care seeking behavior for common childhood illness in the district were residence, perceived severity, graduation status in HEP, types of reported illness, sex of child, wealth Variables: perceived severity, occupation of mothers', age of mothers', age of child, types of reported illness, wealth quintiles and educational level of father were found to be the significant factors for common childhood illnesses in rural mothers. Whereas, variables perceived severity, sex of the children, marital status and graduation status in HEP were for urban mothers, quintiles and educational status of husband.

Based on the above findings the researchers recommended:

- For the district health office: Give remarkable focus on rural mothers' to seek health care regardless of the severity and types of illness and also education should give on the severity, sign and symptoms of childhood illness.
- For the community/ mothers': All mothers' in the district better to give remarkable focus on health extension package and graduation. Mothers' should be give concern for both sex and at any age group of a child equally towards health care seeking behavior when their child's ill.
- Further research has to be done by triangulated with qualitative method.

The question raised was 'have you tried to control exposure factor?' It was responded that the determinant factor was severity of and hard to control.

Presentation 110: Situational analysis of Basic Emergency Obstetric and Newborn Care (BEmONC) services in 42 health centers, by Gizachew Tadele and et.al.

The availability and utilization of proven interventions to reduce both maternal and newborn diseases is still low. To address these challenges, the Last Ten Kilometers Project (L10K), JSI Research and Training Institute, Inc, is working with MOH to improve access to BEmONC services in 42 primary health care units

covering 42 woredas (L10K implementation regions: Oromia, Amhara, SNNP and Tigray) in the first year of the project.

A situational analysis study was conducted during the period of January to April 2013, to identify the status of maternal and newborn health services and gaps related to infrastructure, equipment and essential drugs or BEmONC service provision and ultimately design interventions to fill the gap. Structured questionnaires, key informant interview, observation of service provision and review of medical records were used as data collection tools.

Results showed that 13 (31%) of the health centers had at least 2 BEmONC trained providers. The skilled delivery coverage in the catchment areas of the PHCUs was 20% (10% higher than EDHS 2011). With regard to BEmONC services, only one health center (2.4%) was performing all 7 BEmONC functions. HCs with better availability of BEmONC services associated with higher BEmONC signal functionality.

Shortage of essential equipment, low service utilization and suboptimal respectful care were also found to be the major gaps.

Based on the findings, joint actions were developed in collaboration with the facilities. Intervention results showed that a total of 78 providers mostly midwives were trained on BEmONC from LioK. As a result HCs with at least two care providers trained in BEmONC increased from 31% in April 2011 to 88% in October 2013. The overall skilled delivery coverage also increased from 20% to 29% during the same period. Supplying facilities with equipment and renovation of the facilities are interventions undergoing to address the identified gaps.

It was asked for the functionality of the available equipment and it was responded that all had been assessed. The quality of the services was also raised but it done according to the guidelines.

Major topic: Lab based studies oratory

Moderator: Dr. Almaz Abebe

Presentation 112: The Diagnostic Accuracy of the Rapid Dipstick Test to Predict Urinary Tract Infection in Pregnancy, by Wondwossen Tsegaye.

In the introduction some relevant previous findings were presented. Urinary tract infection (UTI) is an infection caused by the presence and growth of microorganisms, usually due to bacteria from the digestive tract which climb the opening of the urethra. Pregnant women are at increased risk for UTIs. UTI can be either symptomatic or asymptomatic; asymptomatic bacteriuria (ABU) is a condition characterized by bacteriuria without classical symptoms attributable to the urinary tract.

Various methods exist for screening urine culture remains the gold standard for diagnosis but it is however, expensive, and takes 24–48 h to obtain result and it also requires skilled personnel. Due to these reasons Dipstick test is one of the qualitative diagnostic method used to detect UTI because of the advantage of being quick, easy to perform to interpret and can be carried out in primary care giving facilities.

The objective of this study was to evaluate the diagnostic accuracy of the rapid dipstick test to predict urinary tract infection in pregnancy in comparison with the gold standard of urine culture. A hospital based prospective study conducted at Felege Hiwot Referral Hospital (FHRH) from October 2010 to January.

The Case definitions are: Symptomatic UTI: Patients whose urine is yielding positive culture ($\geq 10^4$ cfu/ml) and who have symptoms referable to the urinary tract.

Asymptomatic bacteriuria (ABU): The presence of two consecutive clear-voided urine specimens both yielding positive cultures ($\geq 10^4$ cfu/ml) of the same uropathogen, in a patient without urinary symptoms.

A total of 367 pregnant women participated in the study: 330 asymptomatic and 37 symptomatic. Early morning mid-stream urine samples were collected using sterile wide mouthed glass bottles with screw cap tops and processed in the laboratory within 2 hours of collection. The Ames Multiple Reagent Strip (Bayer Diagnostics Australia was used).

The dip stick rapid test result 55 (15%) of the pregnant women were positive for leukocyte esterase and 21 (5.7%) pregnant women were positive for nitrite. The overall sensitivity and specificity of the dip stick 22.9% and 99.1% (Combined LE and Nitrite).

In Ethiopia majority of all health care facilities use Dipstick analysis for nitrites and leukocyte esterase and microscopic examination for pyuria and bacteriuria for screening. Despite these limitations dipstick test, a positive test merits empirical antibiotics treatment of patient while a negative test is an indication for urine culture. Dipstick test is useful in poor resource setting especially in the third world countries where there is a dearth of trained personnel and equipment for urine culture.

Questions:

1. *The used rapid test supply is only from one producer (Bayer), why is it since the topic of the study indicates for many?*
2. *What is the experience of other countries? It is not mentioned.*

The responses:

- *The used Dipstick tests were available only from one producer and to use more is not possible due to budget shortage.*
- *Similar findings were also observed in other countries.*

Presentation 114: Prevalence of Hepatitis B Surface Antigen [HBsAg], knowledge of the infection and demand for vaccination among clients of International Clinical Laboratories: Ethiopia-Addis Ababa and four Regions, by Atsede Khali.

HBV mostly unnoticed in Ethiopia though it is a viral, sexually transmittable, and highly contagious infection. The objectives of this study were to determine the prevalence of HBV infection and to assess the demand of HBV vaccination.

The study setting were International Clinical Laboratories at patient service centers of Addis Ababa, Adama, Bahirdar, Hawassa, and Mekele. The study design was a cross-sectional study with internal comparison conducted from December 2011 to March 2012. The study populations were individuals who came to ICL with requests of Non-Hepatic function and Non-HBV associated checks. The sample size was 485 selected using systematic random sampling.

The results showed that from 486 participants enrolled into the study 21 tested positive for HBsAg, accounting 4.3% of the sample population with 95%CI. The prevalence of HBsAg was relatively high among the 30-39 age groups, where 7 out of the 135 tested were positive.

Four hundred sixty eight (96.3%) of participants were willing to get prevention of HBV by taking vaccination and 304(62.6%) were able to afford full vaccine administration cost.

It was concluded that HBV became unseen health problem in Ethiopia and availability of HBV vaccination is not extensively known. Widely, health care providers could be the primary source of information and should show how people cannot value affordable preventions on the level of low knowledge about transmittable infections.

The following questions were raised:

1. *How do you compare the findings with the prevalence of HBsAg in the community?*
2. *What is the country plan to provide Hepatitis Vaccine to the health workers exposed to the infection?*
3. *What is the cost of Hepatitis Vaccine in Ethiopia?*

The responses made were:

- *Since the study was designed to see HBsAg in the ages between 20 – 59 and in selected sites, it is difficult to compare with the previous studies done in the country.*

- HBV vaccine is introduced in the EPI program but not for the health workers. The government is believed to work on this issue soon.
- The cost varies between 600 – 800 Birr I selected health facilities that provide the service.

Finally the moderator wrapped up the session with the following suggestion; the study showed the need of the vaccination for more people who are exposed to the infection. EPHA could advocate the need of the vaccination for health workers who are exposed to the infection.

Presentation 115: Serotyping of pneumococcal isolates from patients in Ethiopia, by Surafel Fentaw, and et. Al.

As a background it was mentioned that Pneumococcal disease is vaccine preventable, but serotype-specific protection and Ethiopia started PCV-10 pneumococcal vaccination October 16, 2011 with the support of GAVI (but no data on circulating serotypes).

The general Objective of this study is to determine the serotype of pneumococcal strains which circulate in Ethiopia and their antimicrobial susceptibility pattern.

The study design was quantitative cross-sectional study on Ethiopian patients clinically diagnosed for invasive pneumococcal infection. All cases of invasive pneumococcal infections (bacterial meningitis, septicemia, Pleural fluid) at selected health institutions in Addis Ababa and Gondar were collected from August – December 2012. At EHNRI culture on blood agar plate and incubated under 5% CO₂ overnight, Optochin sensitive and bile soluble isolates in Greaves solution and put at -80°C and Pneumococcal isolates and culture negative CSF transported to NIPH by dry ice.

Antimicrobial susceptibility test (AST) on Muller Hinton fastidious 5% sheep blood and 20 NAD (E-test). Breakpoints according to European guidelines (eucast): Serotyping: Quellung reaction, multilocus Sequence Typing (MLST): (*aroE*, *gdh*, *gki*, *recP*, *spi*, *xpt*, *ddl*). Culture nRT- PCR with target: *lytA* for pneumococcus, *ctrA* for meningococcus *hpd* for homophiles.

The general objective of this study was to determine the serotype of pneumococcal strains which circulate in Ethiopia and their antimicrobial susceptibility pattern.

The laboratory methods utilized at EHNRI: Culture on blood agar plate and incubated under 5% CO₂ overnight; Optochin sensitive and bile soluble isolates in Greaves solution and put at -80°C; Pneumococcal isolates and culture negative CSF transported to NIPH by dry ice.

At NIPH: Antimicrobial susceptibility test (AST) on Muller Hinton fastidious 5% sheep blood and 20 NAD (E-test); Breakpoints according to European guidelines (eucast), Serotyping: Quellung reaction; Multilocus Sequence Typing (MLST): (*aroE*, *gdh*, *gki*, *recP*, *spi*, *xpt*, *ddl*).

Culture negative CSF:

RT- PCR with target

- ***lytA*** for pneumococcus
- ***ctrA*** for meningococcus
- ***hpd*** for haemophilus

Sixty cultures positive; 28 Invasive + 32 Non invasive; Culture positivity rate was 12% Invasive vs. another studies 16%; Confounding factors might contribute for low culture positive rate.

Serotypes distribution: 15 serotypes identified; 7 samples multiple serotypes

Antibiotic Resistant

Bactericidal antibiotics:

- Ceftriaxone and Chloramphenicol susceptible
- Penicillin 24/68 intermediate resistant

Bacteriostatic antibiotics:

- Erythromycin 9/68 , Tetracycline 17/68
- Trimethoprim sulphamethoxazole 21/68
- The susceptibility pattern of invasive and non invasive isolates are similar
- Serotype 14 is resistant at least for 2 classes of antibiotics
- 19 isolates were resistant for two classes of antibiotics
- Three isolates were resistant for 3 classes of antibiotics.

MLST:

- 17 Sequence types (STs) identified
- 7 STs were new for the MLST database.
- Serotype 1 included 3 STs (217, 303 and 8877)
- STs of serotypes 18F, 19F and 20 are similar with NTs
- ST 1203 most frequent (9 isolates) followed by STs 217 & 1475 (8 isolates each).

The conclusions were good public health contribution for the community; and according to this study, the predicted vaccine (PCV-10) coverage is below the standards set by WHO.

Questions and responses:

- Which serotypes you identified were different from the serotype used in the existing vaccine (PCV10)?
Response: seven new vaccine types were identified and the existing PCV10 coverage was only 44%.
- What was the limitation of this study? *Response: It was having a small number of samples and further study is needed.*
-

Finally the moderator commented that since this kind of study is important for vaccination programs, studies with larger number of samples collected from different sites is important to consider.

Presentation 116: Epidemiology of Measles in Ethiopia: A five Years (2008-2012) Retrospective Study: Data from National Measles Laboratory EHNRI, Addis Ababa, Ethiopia, by Tassew Kassa Fetene.

In the introduction section very relevant data were presented to show the burden of this disease. In 2010, 139,300 measles deaths occurred globally. Majority, (> 95%) of measles deaths occurs in poor countries; in 11 countries, including Ethiopia, account for 66% of deaths related to measles. From 1990 to 2003: 2000-5000 measles cases were reported every year. The true burden was estimated from 1 million to 1.4 million cases per year.

WHO Recommended the following strategies to reduce measles mortality: Increasing routine immunization coverage; Periodic supplemental immunization activities (SIAs); Laboratory-supported surveillance, and appropriate management of measles cases.

In Ethiopia: children receive measles vaccine at the age of 9 months. During SIA children aged 9-59 months are immunized and current measles immunization coverage is ~82%. Measles case-based surveillance with laboratory confirmation was established in 2004.

The general objective of this study was to assess epidemiology of laboratory confirmed measles prevalence among cases reported from 2008-2012 in Ethiopia.

The study design and study period was a retrospective study from 2008-2012 at the Ethiopian National Measles Laboratory –EHNRI, A.A. All measles suspected cases investigated and sent for confirmation to the national measles laboratory 2008-2012.

The results were a total of 19848 serum/plasma samples from measles suspects were received. The laboratory was able to test 17,042 (85.9%) for measles IgM and of which 5404 (31.7%) were positive, 11185(65.6%) were negative and 453(2.7%) were equivocal.

All samples characteristics : Duration from onset to sample collection , Samples received within 3 days after collection and samples tested within seven days show statistically significant difference in measles IgM positivity with ($X^2=55.8$ and $p<0.001$), ($X^2=3.24$, $p=0.07$) and ($X^2=263$ $p<0.001$) respectively .

Compared to age ≥ 15 year; age group 1-4 years and 5-9 years, were 3.77 and 3.372 times more likely to develop measles (AOR=3.77; 95%CI: 3.372-4.23) and AOR=3.48; 95%CI: 3.09-3.93) respectively.

Cases investigated during spring and winter were more likely to be measles IgM positive as compared to cases in summer (AOR=1.25; 95%CI: 1.1-1.42) and (AOR=1.17; 95%CI: 1.04-1.31) respectively.

Sex and vaccination history were not significantly associated with measles infection.

It was concluded that the trend of notification as well as confirmed measles cases is increasing. There are gaps in records and documentation of immunization history of children. Children aged 1-9 years are at high risk. Age and season are independent factors associated with occurrence of measles and days between onset and samples collection and TAT are also factors associated with IgM positivity.

The researcher forwarded the following recommendation:

- Routine and supplementary immunization service has to be strengthened to sustain high coverage, considering high risk population and the season;
- Strengthen immunization records keeping at health faculties or by parents;
- Improve measles surveillance to increase the sensitivity;
- The laboratory should do measles virus isolation to determine the serotype of MV circulating; and
- Measles is occurring in children who were vaccinated: further studies are required to determine the real cause.

Question: why is measles positive detection rate high in spring and winter? Response: It could be due to 1. Children could be at home in winter and go to school in early spring and the infection transmission will be easy and fast; ii). But this prediction cannot apply to all sites. The seasonality differs from regions to regions. The response deals with mere observation.

Major topic: Outbreak

Moderator: Ato Adamu Addissu

Presentation 117: Assessment of substance use and risky sexual behaviour among Haramaya University students, by Andualem Derese.

The researcher said that some university students are more vulnerable to SRH and HIV/AIDS problems which might be due to: new environment with poor protection, age and the need to explore life, peer pressure, absence of proactive programs, their sense of non-vulnerability and living without adult supervision (*DKT Ethiopia, 2010*).

The General objective of this study was to assess the prevalence of substance use and magnitude of risky sexual behaviour and its association with substance use among Haramaya University students.

The study design and period were a cross-sectional study, conducted from December 2010 to May 2011. The source population were all undergraduate students who were registered for 2010/11 academic year in Haramaya University and the study population were all students who were selected randomly. The total sample size was $694 + 10\% = 764$ students.

The results showed that on substance use behaviour: more than half (53.8%) of the respondents used at least one substance in their lifetime; Of these, 72.1% started before joining and 27.9% after joining the university.

Substance use patterns & reasons:

Alcohol use:

- Majority (81.5%) were using alcohol occasionally
- (66.9%) personal pleasure, (18.5%) to get relief from tension and 51(16.9%) took it due to peer influence.

Khat:

- About half (49.5%) chew khat occasionally & 28.2% always
- 27.5% to improve work/academic performance, 20.5% to get personal pleasure, 17.5% peer pressure, 7.5% to get relief from tension, 18.1% other

Cigarette:

- 47.6% smoke occasionally & 36.6% use it always
- Reasons for cigarette smoking were: to get personal pleasure (43.9%), to get relief from tension (39.0%), to stay awake (30.5%), to improve academic performance (30.5%) and peers influence (22.0%).

Illicit drugs:

- 77.3% use it occasionally
- Personal pleasure (57.2%), peer influences (32.1%), to stay awake (14.3%) and to increase pleasure during sexual intercourse (10.7%).

Sexual behaviour of HU students:

- 243 (33.5%) students had sexual experience
- 179 (73.7%) were males and 64 (22.3%) were females
- Mean age of first sex=18.5 years (range=14-24years)

Of 243 sexually active students: 177 (72.8%) had their first sex before and 66 (27.2%) after joining the university, 51 (77.3%) had their first sex outside and 15 (22.7%) in the university compound.

Reasons for first sex: Personal interest or curiosity 103 (42.4%), Promising word from partner for marriage 58 (23.9%), peer pressure 52 (21.4%), marriage 18 (4.9%), sex for exchange of money 5 (2.1%), by force 4 (1.6%), to pass examination 3 (1.2) and other reasons 8 (2.5%).

Risky sexual behavior of students: From 243 sexually active, 65.8% had at least one RSB: 28 (11.5%) had MSP, 108 (44.3%) had never used or used condoms inconsistently, 86 (35.3%) had started sex <18 years and 29 (16.3%) of males had sex with CSW.

Contraceptive method used during last intercourse

Among 64 sexually active female students, 23.1% had once been pregnant, a student pregnant twice and 81.2% of pregnancies ended in abortion.

Factors contributing to substance use: Among the participants, 390 (53.8%) reported having used at least one substance in their lifetime. There was a statistically significant association between lifetime prevalence of substance use and sex, year of study and religion. The odds of substance use among Protestants was lower when compared to Orthodox religion followers [AOR (95% CI) = 0.35 (0.20, 0.59)] but being a follower of Muslims religion has 2.2 times higher odds to use substances [AOR (95% CI) = 2.26 (1.49, 3.42)] than Orthodox followers.

The conclusions were high prevalence of substance use, majority of the students were engaged in unsafe and risky sexual practices, risky sexual practice is high among males than females and use of Khat, alcohol and tobacco is significantly and independently associated with risky sexual behaviour among HU students.

The recommendations made were:

- Universities should inform students, especially fresh students, about the health and socioeconomic problems associated with substance use,

- HU administration should strengthen security in the campus compounds,
- Intervention activities to bring about behavioural changes among the students on use of Khat, alcohol and other drugs,
- Students should be encouraged to practice premarital abstinence, and
- Consistent use of condom for sex before marriage regardless of partner characteristics should be encouraged among students.

Questions and responses:

- How do you define sexual practice? Response: By sexual practice I mean vaginal sex (clearly put on the self-administered questionnaires).
- What do you mean when you say students making sex inside and outside the compound? Why? Response: Since the main campus of the HU is located some KMs away from the town, students may practice sex inside the university compound.
 - Is Khat drug? Response: Yes, it is a drug
- Why don't you recommend on peer pressure? Response: Comment accepted

Presentation 118: “The Early Determinants of Age at First Sex and First Marriage: Evidence from the Jimma Longitudinal Family Survey of Youth”, by Ida Sahlu, and et.al.

The researchers used longitudinal survey data to estimate the relative influence of educational and occupational expectations and life plans that youth develop in early adolescence on the risk and timing of first sex and first marriage at older ages. They also examined the impact of different aspects of the early family and community environments on the transitions into first sex and first marriage.

Data for this study came from multiple survey rounds of the Jimma Longitudinal Family Survey of Youth (JLFSY) conducted in Jimma by investigators from Brown and Jimma Universities. The JLFSY began with a baseline survey of 2,100 randomly sampled youth age 13 – 17 years and followed them for seven years.

The results showed that the life plans that youth form during early adolescent have a significant impact on the age at which they become sexually active and marry. Both young men and women who have high educational and occupational expectations delay first sex and marriage. Young men who felt their parents' had high expectations for them delayed first sex. Young men who lived in HHs without a male HH head were at a significantly higher risk of initiating premarital sexual activity than young men who lived in a home with a father or other senior male present.

In conclusion family and career plans that youth form during early adolescence, and early family and community experiences have a long-term impact on youth sexual behavior and age at marriage later in life. Interventions that target youth early in life can have lasting effects on youth life chances.

The questions raised and the responses made are presented as follows:

1. *Is economic status related to pressure to get married as early as possible? Response: Baseline HH Wealth Index was not found to be statistically significantly associated with age at first sex and marriage. We hope to include the follow-up HH level income in future analysis.*
2. *Is schooling success associated with age at first sex and premarital sex? Response: We did not include that variable in our analysis but hope to capture success in school using continued school attendance which we hope to do in the future.*
3. *Do substance use and sexual initiation complement each other? Response: I believe they complement each other and provide insight on the determinants of sexual initiation.*
4. *Which variable was more of a risk factor for premarital sex? Response: Career plans at baseline, particularly for girls.*

Presentation 120: ‘Malaria Outbreak Investigation and Response in Sokoru District, Jimma Zone, May, 2012, by Daba Mulleta.

In Ethiopia, more than 68% populations live in malaria risk area. Transmission is unstable and seasonal: September to December (major) and April to May (Minor).

The general objective of this study was to investigate the cause and magnitude of morbidity and mortality due to malaria outbreak and to conduct intervention.

The study area was Sokoru woreda, Jimma zone, Ethiopia. The study design was unmatched case – control.

The results: 2,271 suspected for malaria, 1,093(48.1%) confirmed by RDT.

aps identified: Poor recording, reporting and documentation at woreda and health facility; Lack of woreda epidemic preparedness plan; Poor response of kebeles managements in prevention and control activities (S/dike) and shortage of budget at woreda level.

Intervention measures conducted: Health professionals were mobilized to health posts; health education conducted for communities, IRS was conducted for 1,906 unit structure, drainage of breeding sites and larval control.

The conclusions were: Lack of adequate recording, reporting and analyzing data at zone and woreda level; Malaria case load associated with proximity of residence to mosquito breeding sites and under utilization of ITNs in malaria outbreak affected Kebeles.

Based on these findings the following recommendations were made:

- Community mobilization for environmental management is crucial to minimize morbidity and mortality due to malaria;
- Apply IRS for those areas where the option of environmental manipulations may be difficult;
- Strengthen weekly IDSR report, and
- Improve coverage and utilization of ITNs.

Questions and responses:

1. *Did you get ethical clearance from the RHB? Response: Due to time constraint we didn't wait for ethical clearance. We used the letter permission.*
2. *How did you evaluate the HMIS report at woreda level that is being used for the outbreak detection? During the outbreak the HMIS report system was not implemented but we used the weekly IDRS report format.*
3. *How was the strength of PHEM section at different levels? Response: The PHEM sections at different levels enlist the weekly data but they did not analyze and utilize for action.*
4. *How did you assess the ITNs coverage and utilization in the woreda? Response: We assessed the ITNs coverage and utilization qualitatively not quantitatively at the HH level for case-control.*

Presentation 121: “Rubella Outbreak Investigation in Kafta Humera District, Ethiopia,” by Alefech Adissu.

Rubella virus spreads from person to person via respiratory droplets, direct contact and congenitally. Its incubation period ranges from 2-3 weeks and a rubella case remain infectious 7 days before rash onset to 5–7 days thereafter. However, infections during early pregnancy severely affect the fetus, resulting in miscarriage, fetal death, and stillbirth. After birth, the infant can develop congenital rubella syndrome (CRS) like hearing impairments, cataract and congenital heart disease. CRS has no definite treatment and those with CRS often require lifelong care. In 2008, globally more than 110,000 infants were born with CRS, 38% of them reside in Africa.

In Ethiopia, acquired and congenital rubella are not noticeable diseases, and epidemics often go unnoticed. It is not part of Expanded Program on Immunization (EPI). From 2004-2009, a total of 992

laboratory confirmed rubella cases were reported from measles case based data, 80 cases were from Tigray. From 2010-2012 a total of 41 laboratory confirmed cases reported from Tigray.

On January 23, 2013, Kafta Humera health office called the regional health bureau to manage the outbreak and on January 25 a team was deployed to: confirm the outbreak, identify risk factors and undertake possible intervention measures. Five blood samples were collected from rubella suspected cases for confirmation. Each case was compared to two matched controls recruited in the households of the closest neighbors and the same age group. Seventy cases and 140 controls were required. Multivariate conditional logistic regression (clogit command) was utilized to identify independent factors associated with contraction of rubella.

We found a total of 243 rubella suspected cases and no death, of them one pregnant woman during her 1st trimester, 5/5 blood samples positive for rubella specific IgM Abs and none were positive for measles and 238 cases linked epidemiologically.

The results were: median age was 7yrs (ranges from 3 month-45yrs), about 48% of cases were children aged 5-9yrs followed by children 1-4yrs (28.8 %), females comprise 51%.

Age specific attack rate (ASAR) was:

- 5-9yrs old children (7.1 per 1000 population)
- 1-4 years old children (5.6 per 1000 population)
- ≥15yrs old (0.3 per 1000 population).

Clinical symptoms of cases enrolled in case control

- Maculopapular rash 70(100%), fever 63 (90%), Lymphadenopathy 55(78.6%), red eyes 42(60%), cough 39 (55.7%), and
- Arthritis, coryza and head ache 2(2.9%).

Finally, it was recommended that Rubella should be included in the surveillance system for better understanding of the magnitude of the disease, decide the cost effectiveness and technical capacities of the health system to maintain the optimal vaccination coverage of rubella vaccine in Ethiopia before it is introduced, and Rubella specific case definition is needed for early case detection. Further study on susceptibility of rubella in adults is needed.

Questions and responses:

1. You have addressed only crowdedness in school. Have you seen the crowdedness in the living condition of cases? Response: Yes, we have looked at the housing condition of cases in their living environment (crowdedness). Those that have four and above children per HH were labeled as crowded. Six and above persons living in a room is one of the risk factors.
2. *To what extent have you looked the class-rooms of the schools? Response: Since Rubella transmits from person to person through direct contact of aerosol, we had seen only the number of students per class and the ventilation of the class room. I think this is enough inspection.*
3. *Congenital Rubella syndrome is one of the complications of Rubella. So what was the outcome of the pregnant woman? Response: We had discussed with the health professionals to make follow up to the pregnant woman and to take sample from the child when she gives birth. But, currently I don't know the status of the child.*

Major topic: Maternal Health

Moderator: Dr. Alamnesh H. Mirkuzie

Presentation 123: “Does work status affect contraceptive use among peri-urban Ethiopian women? in Sebeta town Southwest Addis Ababa, Ethiopia. Analysis on the Family, Health and Wealth study”, by Meselech Assegid et. al.

The total fertility rate in Ethiopia has been reduced to 4.8 per woman in 2011 from 5.4 in 2005 and CPR for modern methods among married women has risen to 27% (EDHS 2011). In peri-urban Ethiopia light and heavy industries are expanding and married women's labor force participation, particularly among the young, is increasing. Couple communication and decision-making around fertility and contraceptive use will be affected by women's work status.

The main purpose of this study is to assess how CPR and women's work status and age, net of other influences, are related to her contraceptive use.

Data for this analysis came from the first round of the Family, Health and Wealth Study (FHWS) conducted in 2009/2010 in Sebeta – a peri-urban town located 25 kms. to the Southwest of Addis Ababa. The cohort of nearly 1000 families is part of the ongoing multi-site longitudinal FHWS. An initial census of HHs was done followed by systematic random sampling of HHs having couple that met the eligibility criteria of the wife being aged 15 to 44 and the husband 18 to 59.

The following exposure factors were gathered: age of the respondent, age of the husband/partner, age of the respondent at first sex, respondent education, husband/partner education, parity, discussion about contraceptive use, decision making role, affordability of child schooling, husband support in a HH chore, need for more child and HH family size.

The results/key findings were CPR among the study population was high at 77% of married women or their husbands/partners, and the majority used modern methods (injectables and implants). Two fifths of the females were working; half of them in salaried occupations and another third were petty traders. CPR was higher among younger than older women. In the blocked regression models with wife's age, age difference with her husband, her education, parity, and occupation, all were significantly associated with contraceptive use in expected directions. Women in salaried occupations had 1.72 times higher adjusted odds of contracepting than those not working and women age 15 to 24 had 4.12 times higher adjusted odds than women aged 35 plus to use contraception.

In conclusion, contraceptive prevalence is remarkably high in this peri-urban setting and appears to be consistent with the replacement-level fertility observed in other studies of AA. Younger age, (less than 35 years), secondary and post-secondary education, having an agricultural or salaried occupation, parity, couples' discussion about contraceptive use and women's desire for no more children are key influences on contraceptive use in the peri-urban communities in Ethiopia.

Thus, in addition to the need for more rigorous evidence promoting women with unmet need, women would like to remain the workforce and be free from unintended pregnancies and their consequences require policy attention.

Questions and the responses:

- 1. Could you tell us about the measurements? Response: Measurements were done twice on the same case but here it is reported the first measurement (baseline data).*
- 2. As the age differs between husband and wife, there is a tendency of low contraceptive use, why? Response: Old husbands try to keep their wives by having more children.*
- 3. What is the cut-off for the age difference? Response: The cut-off for the age difference was 10 years and above.*

Presentation 124: Preferences of place of delivery and birth attendants among women of Shashemene town, by Junayde Abdurahmen.

Currently, in Ethiopia, there are significant policies aimed at improving maternity care services and averting huge problem of very low SBAs and high MMR through the provision of free maternity care services to meet MDGs. Experience from other countries reveal that women are not utilizing even the available and

accessible maternity care services which is also true to Ethiopia. Though many studies have been carried out to identify and understand why MHC services are underutilized in Ethiopia, still no remarkable changes have been made.

The main objective of the study was, therefore, to assess preference to place of delivery, delivery attendants and associated factors among women at Shashemene town.

The study design was community based cross-sectional with mixed scheme and was conducted in Shashemene town from December- January 2012. The source population are all women of 15-49 years old and living in Shashemene town. The study population are all women who gave birth in the last 1 year. Sample size was determined using multi-stage sampling technique and the total samples were =288.

The results showed that of 276, almost 152 (55.1%) explain ANC use as essential for the health of mother, and baby, 98 (35.5%) women say ANC is necessary to manage health problems and 5 (1.8%) claimed as it was important to anticipate and detect the problems associated with pregnancy.

All 6 FGDs, IDI agree that ANC was important for the health of mother and baby. But there are still women, who believe that if they delivered at health facilities they can catch cold. For e.g. a 45 years old TTBA explains:

"... the women believe that if we give birth in health institutions "qorraatu nudhawaa" i.e." we get cold attack" whereas when we give birth at home, there is secured privacy, by shutting the door and, cover the lady with clothes. Even no one can see her." [Panel A: TTBA Panel].

KAP of child bearing women about MHC services in Shashemene Town: 174 (63%) knowledgeable, 170 (61.6%) positive attitude and 185 (67%) with favourable practice.

Factors affecting MHC use:

Respondents from FGDs and IDI stated that as women preferred home delivery due to: lack of awareness, absence of problems, culture, transportation, Mal t/t, service expense, shortage of money, female preference, discrimination, accustomed and trusted on TTBA's, family care.

A female from a Community site says: *"There is verbal abuse from Health professionals during delivery; no one treats the mother as TBA. They must share mothers' problem as TBA."* [Panel F: community female panelist].

Most of the reasons for preferring to deliver at a particular HF: service quality 132 (47.8), fear of problem of home delivery 33 (12%) and better approach of HCWs 13 (4.7%).

About services improvement on MHC:

According to participants explanation, service will be improved when the stated problems such as awareness, skill gap of HCWS, in accessibility of free services, poor approach of professionals and transportation are solved.

Delivery attended by HCWs 174 (63%), TTBA's 92 (33.3%), self 9 (3.3%) and Family=1 (0.4%).

Preferred attendants: F= Most of 152 (55%), M= 52 (18.6%) and unspecified 73= (26.4%)

Out of 152 (55%) the main reasons for preferring home delivery were cultural issues 69 (45.4%), shyness to face the male 51 (33.6%), religion 26 (9.4%), and others.

About mothers' preference to delivery place and birth attendants.

In line with quantitative participants from qualitative explained about the preference of Female attendants to Male by raising various issues like: Religion, Culture, privacy/sex similarity, maltreatment of HCWs, trust on TBAs,

One example, from FGDs *Panel of Female Health professionals* illustrate here as follows: *"... Mothers preferred female's attendants/ TTBA's since they are trusted, in the village due to religious and cultural issues. For example at home TTBA's attended delivery without exposing the mothers to others/ Hagoggdee" where as in HF laboring mothers are lying on the coach by raising or elevating her legs at*

Lithotomic position they don't like to be embarrassed /መስቀቁልን አይፈልጉም።” [Panel F: Female Health professionals].

Respondents education, age, family income, husband attitude have significant association with women preference to home/ TTBA. Women who have <4 children less in preferring TTBA. Decision making power of women is significantly associated with women choice towards preference for TTBA (OR.059,95%CI.017,.207).

The study demonstrated disparity in overall preference of women: delivery place, care providers and service use due to difference in socio demographic, obstetric and attitude. So, need due attention since women are not using maternity care services similarly.

Based on the findings of this study the following points are suggested:

- There is the need to understand and expand services availability and accessibility at PHCU level and strengthening the skill gap of HEW/HCWs.
- There should also be equipping and enabling female and TTBA to mitigate disparity in ANC, delivery and PNC to have immense role on provision of MHC.
- Moreover, services should be extended at home based level since no women come back for follow up from home after delivery. In addition to this due attention should be given to escalate female education to meet MDGs and ultimately, to improve women health status in the community and to make right and informed choices.

Major topic: HIV/TB

Moderator: Dr. Degu Jerene

Presentation 129: The Effect of Incident Tuberculosis on Immunological Response of HIV Patients on Highly Active Antiretroviral Therapy at Gondar University Hospital, Northwest Ethiopia: A Retrospective Follow-up Study, by **Abate Assefa** and et. Al.

As an introduction, the researcher said that in developing countries, TB remains a major public health threat among HIV-infected individuals. In African countries, about 37% of TB cases were co-infected with HIV and this accounted for 75% of TB cases among HIV patients worldwide. In Ethiopia, in 2007, the TB-HIV co-infection rate was **20-50%**

He pointed out that effective ARV therapy is usually conveyed by quantitative & functional restoration of pts IR and decline in HIV viral load and that regular and lifelong medication of HIV patients is challenged with emergencies of Rx failure. In resource limited settings, IF criteria, remains the strongest predictor of Rx failure, impaired IR may indicate incomplete suppression of plasma HIV-RNA which results ARV drug resistance.

Justification of the study: The recovery of CD4+ T cells during ART in TB co-infected patients is less clear. In spite of HIV status CD4+ T lymphocytopenia has been observed in TB patients and TB may act as a cofactor that accelerates the impairment of the IR. Therefore, the general objective of this study was to assess the effect of TB incidence on immunological response of HIV patients during ART at University of Gondar Hospital. The Specific objectives are to determine immunological failure rate, to determine the role of incident TB on IF and to identify predictors of IF.

Method: A Retrospective follow up study on patients initiating ART between 1st September 2007 and 30th of August 2008 at the University of Gondar Hospital HIV care unit. The study was carried out on 484 HIV adult patients who had at least 6 months of FU, having at least two CD4 cell measurements and who started ART from Sep 01, 2007 to Aug 30, 2008. To determine effects of TB on IR, the presenter said, patients who were on Rx for active TB at ART start have been excluded. 84(17.4%) had prevalent TB at ART start and 400 patients were included for FU analysis.

Result: the result was that from a total of 484 eligible patients, 84 (17.4%) had prevalent TB at initiation of ART. Incident TB developed in 26 (6.5%) of patients within four years on ART, with an incidence rate of 2.2

cases per 100 person years of follow up. Seventeen (57.7%) of incident TB developed with the first year of ART. One hundred four (21.5%) patients were found to have immunological failure with a rate of 8.5 per 100 patient-years of follow up. The proportion of immunological failure was significantly higher among patients with incident TB ($p=0.034$) and base line CD4 count below 100 cells/ μ l (Hazard ratio 1.72; 95%CI 1.13-2.62). Moreover, base line CD4 count below 100 cells/ μ l was significant predictors of incident TB (HR 2.52; 95%CI 1.06-5.97).

Limitation of the study: The presenter said that as a retrospective design we excluded a large number of patient charts that could not be verified by chart review due to unavailability of full information which may have introduced bias.

Conclusions: High immunological failure rate in our cohort occurred in the first year of ART enrolment and that development of TB during ART was associated with impaired immune response. The timing of initiation of ART was major determinants of the change in CD4+ T cells count recovery. He added: the result highlighted the beneficial effects of earlier initiation of ART on CD4+ T cells recovery

Recommendations: For better understanding of the association between incident TB and CD4+ T cell count recovery of HIV Pts during ART prospective cohort study should be considered. Strengthening early detection of TB and appropriate management of TB-HIV patients and as recommended by WHO 2013, new guideline for early initiation of HAART was important.

Presentation 130: "Assessment of risky sexual behavior and risk perception among youths in western Ethiopia: The influences of family and peers. A comparative cross-sectional study", by Elias Legesse

The HIV/AIDS epidemic remains to be a major public, social, economic and development challenge both in Ethiopia and the world. Only very small amount has been explored about the role of parenting process and peers in protecting youths from harm in the context of Ethiopia in general and in the study area in particular. This study was, therefore, conducted with the intention of filling this gap by pinpointing risky sexual behavior, risk perception and the influences of family and peers for possible interventions.

The study has applied a comparative cross-sectional quantitative study design triangulated with qualitative study in western Ethiopia from March to August 2011. Systematic random sampling technique was used to select study subjects. A total of 1,200 in-school and out-of-school youths aged between 15-24 years were included in the study. A pre-tested interviewer administered questionnaire was used during data collection.

Regarding the results, it was reported that over one third of in-school and 41.4% out-of-school youths reported unprotected sex during the 12-month period prior to interview. More than one third of in-school youths 37.1% reported that they had two and more than two lifetime sexual partners compared to 32.6% out-of-school youths. Out-of-school youths feel that they are at higher risk of getting HIV than in-school youths (AOR (95%CI) = 2.93 (1.45, 4.35)). Youths who had high family connectedness were less likely to commence sexual activity and had multiple sexual partners than their counterparts ((AOR(95%CI)=1.98 (0.63,0.94) and (AOR(95%CI)=2.79 (1.24,4.43)) respectively. Youths who reported that parents always know what they are doing when they are away from home and those who reported that parents know every activity and interest of their close friends were less likely to have premarital sex ((AOR(95%CI)=1.96 (1.48, 3.58) and (AOR(95%CI)= 2.03 (0.48, 0.87)) respectively. Those youths who have male friends, who have practiced sex had three fold increased odds of having multiple sexual partners than their counterparts, (AOR (95%CI) 3.11 (1.60, 8.57)). Having pressure from peer to have sex were significantly associated with having multiple sexual partner, (AOR (95%CI)=2.82 (1.62,2.49))

Conclusion: A substantial proportion of out-of-schools youths engaged in risky sexual behavior than in-school youths. Parents and peers play a role in shaping the behavior of youths. Consequently, the dimension of good parental process and positive peer factors have to be strengthened.

Questions raised and the responses made were:

1. *Have you considered substance use? Response: It was not studied and that is the limitation.*
2. *How did you use the application of technology? Response: Did not focus on technology.*

3. *What was your key finding? Response: Details can be obtained from the presentation.*

4. *How did you use connectedness? Response: It is not included in the methodology.*

Presentation 131: “Household contacts screening adherence among tuberculosis patients in Amhara region, northern Ethiopia”, by Gebremedhin Berhe and et. Al.

In his introduction the researcher said that Tuberculosis (TB) remains a major global health challenge and it is the second leading cause of death from an infectious disease worldwide following HIV. Globally, an estimated nine million new cases of tuberculosis and 1.4 million TB deaths were reported in 2011[WHO 2012]. The emergence of MDR TB and absence of new effective vaccine made tuberculosis a threatening disease of the world

Quoting different sources Gebremedhin said that household contacts of active TB cases are at high risk for getting TB infection, in one year, a single source of infection (PTB patient) in a community can infect, on average, 10 to 15 people she/he has contact with and that patients with smear positive TB are responsible for up to 90% of the transmission occurring in the community.

As a justification to the study it was noted that TB case detection remains low in Amhara region and this compromises the efficacy of TB control efforts in the region; Screening of household contacts is important for the control of the spread of tuberculosis in the community and little is done at the assessment of contacts, and disease prevention actions among families and the community where the TB case lives with. This study will, therefore, serve as great input in promoting the contact tracing activity.

The general objective is to assess household contacts screening adherence and associated factors among tuberculosis patients in Amhara region, while the specific objectives are to determine the household contacts screening adherence among tuberculosis patients in the Region and to identify factors associated with household contacts screening adherence among tuberculosis patients in the Regional State.

A cross-sectional study was conducted from May to June 2013 in five urban districts of Amhara National Regional State, Ethiopia, where 418 patients receiving treatment at tuberculosis (TB) clinic were recruited. Pulmonary tuberculosis patients aged 18 years old and above were included in this study and patients who do not have household contacts were excluded from the study. All patients were interviewed using a pre-tested structured questionnaire and the response rate was 99.1%. Bringing at least one household contact to clinic for TB screening was regarded as adherence to household contacts screening. Binary logistic regression was deployed for analysis.

The result of the study was that the overall adherence rate to household contacts screening among pulmonary TB patients in Amhara region was 33.7%, 95%CI:29.32%,38.37%. Among the 278 contacts that had been screened for TB, 18 (6.5%) were diagnosed with tuberculosis. The adherence rate among HIV positive and HIV negative TB patients was found to be 35.3% and 34.2% respectively. Adherence was higher for Muslims than for Christians. Family income was significantly associated with adherence to contact screening [p-value=0.013]. Adherence was 3.22 times higher among patient who got health education from health Care Worker [Adjusted Odds Ratio (AOR)=3.22;95%CI: 1.88 to 5.51] times higher among patients with sufficient knowledge on TB [AOR 2.17;95%CI:1.29 to 3.67]. Significant social related factors were relationship with contacts [p-value=0.0230 and family support [p-value=0.068]. Being smear negative pulmonary disease was negatively associated with adherence [AOR=0.34;95%CI:0.21 to 0.55].

Limitation of the study: There might be social desirability bias from participants towards which they assumed good response. The setting was only limited to urban districts

Conclusion: Adherence rate to household contact screening among pulmonary tuberculosis patients in Amhara region is low and similar adherence rate was found among HIV positive and HIV negative patients in the study area. Religion, family income and relationship with contacts, family support, type of TB, health education by HCW and knowledge on tuberculosis were the predictors that were significantly associated with adherence to contact screening.

Recommendation: Enhancing TB clinic service delivery is necessity to improve the quality of contact tracing mechanism and there is the need to involve religious institutions in the referral of household contacts of tuberculosis patients. And finally, continuous health education of TB patients should be a priority.

Presentation 132: “Validation of the condom use self-efficacy scale in Ethiopia,” by Debebe Shaweno and et. Al.

In his introduction the researcher observed that sexual intercourse was the main mode of HIV transmission and that condoms are key components of prevention strategies. People are required to exercise control over their own behavior (self-efficacy). Self-efficacy was described as a belief an individual uses to execute a measure of control over his or her environment and that even though individuals possess adequate knowledge and required skills, they do not adopt them when they lack self-efficacy.

The presenter further pointed out that measurement of CUSES requires contextually suitable, valid and reliable instruments. However, many researchers reported self-efficacy using invalidated tools. While developing a scale with a local vernacular remains the best option to measure self-efficacy, validating and using the existing scale appears to be economical.

Therefore, this study aims to construct a condom use self-efficacy scale suitable to Ethiopia (CUSES-E), based on the original scale developed by Brafford and Beck.

The general objective of the study is to determine the cultural suitability of the CUSES in Ethiopia while its specific objectives are to construct factor structure of CUSES_E, to determine the validity of the scale and to determine reliability of the scale.

A cross-sectional study was conducted on a random sample of 492 students at Hawassa University. A self-administered questionnaire containing 28 items from the original scale was used to collect the data. Principal Component Analysis (PCA) with Varimax rotation was used to extract factor structure. Cronbach's alpha and item-total correlations were used to determine the internal consistency of the scale. The convergent and discriminant validity of the scale was verified using a correlation matrix.

The result of this study was the PCA extracted three factors containing a total of 9-items. The extracted factors were labeled Assertiveness, fear for partner rejection and Intoxicant Control, with internal consistency coefficients (Cronbach's alpha) of 0.86, 0.86, and 0.92, respectively. Altogether, the factors explained 77.8% of variance in the items. An evaluation of CUSES-E showed a significantly higher self-efficacy score among students who ever used condoms; $p < 0.00$. The correlation matrix revealed that all of the convergent correlations were higher than the discriminant ones, providing evidence in support of both types of validity. In the split sample validation, the communalities, factor loadings and factor structure were the same on the analysis on each half and the full data set, suggesting that the new scale can be generalized and is replicable.

Conclusion: the finding that a unique dimension emerges when using an Ethiopian population suggests that CUSES should be validated to local contexts before application. The CUSES-E is valid, reliable and replicable. Therefore, health cadres and researchers in Ethiopia can apply this scale to promote condom utilization to Ethiopian school youths. However, future research to develop a suitable scale (highly valid and reliable) in concordance with the local vernacular using a prior qualitative study is needed.

Major topic: Health Care Financing

Moderator: Ato Tiruneh Sinnshaw

Presentation 135: “The role of Health Extension Workers in improving access to maternal health services in Aleta Wondo Woreda,” by Dr Ruth Jackson and et. Al.

In her introduction the researcher said that Ethiopia has both a high neonatal mortality rate (37/1,000) and a high maternal mortality ratio (676/100,000).

Quoting CSA and ICF International 2012 and the FMOH 2010, she said that Ethiopia is committed to achieving the Millennium Development Goals (MDGs) 4 and 5 by improving access to and strengthening

facility-based Maternal, Neonatal and Child Health (MNCH) services as well as increasing institutional deliveries by skilled health workers to 62 percent by 2015.

There is large gap between the country's health-care needs and the availability and accessibility of health services. The Health Extension Program focuses on prevention and promotion of health services at *kebele* level. Two Health Extension Workers (HEWs) visit house-to-house and provide some services at health posts and HEWs provide family planning, clean and safe delivery, essential newborn care services, and other services that aim to halt and reverse the spread of major communicable diseases such as HIV/AIDS, TB, and malaria.

The objective of the paper is to examine the role of health extension workers in providing essential MNCH services at the community (*kebele*) level including clean and safe delivery, and communication with referral center.

The paper explains the pilot phase of a qualitative research project that aims to identify ways to improve the utilization of MNCH services in rural and pastoralist Ethiopia. In November 2013, 15 HEWs in Aleta Wondo Woreda (Sidama Zone, SNNPR) were purposively selected and trained to interview women to provide insights into what the women thought might increase their utilization of health facilities. Semi-structured interviews were also conducted with the HEWs and five skilled health workers to learn about their experiences assisting birthing women and referring complicated maternity cases. Analysis followed a process of data reduction, data display and conclusion drawing/verification with the data organized around key themes.

Key findings show that most women still give birth at home. Traditional practices include keeping silent during labor and giving birth wrapped in blankets. Barriers to health facility attendance include not having permission, poverty, distance and fear of exposing themselves to health facility staff. Interviews with HEWs showed that while some have been trained in clean and safe delivery, they have limited personal experience assisting birthing women either at home or in the health post. They are not called for 'normal' delivery but only after 'long' labor. While it is taken for granted that women give birth at home, those women who do seek health care need their husband's permission to do so. But as HEWs are known and trusted community members, many women prefer to see them rather than going to a health facility where they do not personally know the staff.

The following recommendations were made at the end of the presentation:

Provide training to *all* HEWs in antenatal care, birth preparedness, complication readiness; and, communication with a referral centre. Women who have good relationships with HEWs are more likely to access health facilities.

It is important to mobilize communities to encourage pregnant mothers to give birth in health facilities through the Health Development Army (HDA) and HDA needs to focus on collaborating with HEWs to refer more women to health centres.

It is also important to Allow HEWs who accompany women to a health centre to stay in the delivery room if the mother requests it. And finally, *Health education is not enough*: all health centre staff need to be friendly, gentle, kind, and discrete so women who can talk about their problems and allocate more resources for skilled health professionals to go to *kebeles*.

Presentation 137: "Adverse Drug Events and Medication Errors in Hospitalized Children at Jimma University Specialized Hospita" I, by Tesfahun Chanie and et Al.

By way of introduction the researcher said that patient safety is a global public health problem and measurement of impact of injuries due to medical care is the first step. Adverse events are one of the indicators and adverse drug events (ADEs) and medication errors/MEs/ are one of these categories.

The incidence and nature of adverse drug events (ADEs) and medication errors in hospitalized children have been described well in western countries unlike in developing countries. Hence, investigating

medication safety issues in our setting is essential from the local and global perspectives in patient safety so to design appropriate interventions and hence to improve the quality of health care.

The general objective is to assess the magnitude and nature of ADEs, PADEs and Medication errors in hospitalized children at JUSH and the specific objectives include: to determine the incidence of ADEs, PADEs and medication errors, to establish the Severity of ADEs based on explicit criteria, to find out the percentage of ADEs that is preventable, non-preventable as well as to identify the stages in the medication use process at which medication errors has occurred and to make out associated factors with occurrence of ADEs, PADEs and medication errors

As regards to the method and participants, this study was conducted over a 12-week period from 1 Feb – May 1 2011 in pediatrics ward, JUSH. There were four medical units under the pediatric ward, namely, General pediatrics Ward A, Critical, Neonatology and Nutritional Rehabilitation Unit (NRU)

Concerning the study design and population, the study is a prospective observational study and the study subjects were children admitted at any of the above medical units and the patients were followed for the main outcome measure till discharge or any reason that they were no longer be cared for. Patients were excluded if the hospital admission was < 24 hours, or if the admission was the result of an intentional (self-administered) overdose.

Patient characteristics: 634 admissions reflecting 600 patients, total of 6182 patient-days of length of hospital stay, 2072 medication orders and 35,117 medication doses were given.

The age ranges = newborns to 14 years of age, 33.9% -- infants and 58.5 % of the patients studied were male in gender.

The top 10 diagnosis made for hospitalized children:

- Severe Pneumonia in 173(27.3%) of admission,
- Severe acute malnutrition 120(18.9%),
- Early/Late onset Neonatal sepsis 108(17.0%), Meningitis 59(9.3%),
- Acute gastroenteritis 46(7.3%), Malaria 39 (6.2%),
- Anemia's of different causes 43(6.8%), First episode of wheeze 32(5.1%),
- Congestive heart failure 27(4.3%) and abscess 26(4.1%).
- A total of 58 Adverse Drug Events, ADEs / 46 patients
 - 19(32.8%) = Preventable ADEs
 - 39 (67.2 %) = non- preventable ADEs
- A total of 88 Potential Adverse Drug Events, PADEs / 68 patients
 - 72(81.8%)- Non-intercepted
 - 16(18.2%) - Intercepted

Preventability of ADEs

- 19(32.8%) ADEs ----- Preventable ADEs
- Improper dose (42.1%) – type of medication error
- Administration stage of medication use system --- commonest stage

Regarding the additional interventions required as a result of the adverse drug events:

- prescription of additional medications – for 30 ADEs
- Discontinuation of the offending agent – for 16 ADEs
- 4 ADEs ----- required dose reduction.
- 15 ADEs ----- required increased monitoring of Vital signs and or lab values
- Other interventions include: change of the IV access site for injection site phlebitis and in some cases flushing the IV line after administration, daily wound care, drainage

PADEs:

- PADEs were frequently seen in Critical unit of pediatric ward(54.6 % of the total PADEs),
- While 25 %, 13.6% and 6.8% of PADEs were found in Ward A, Neonatology and Nutritional Rehabilitation Unit , and
- Most PADEs occurred at the prescribing/ordering stage of medication use processes.

Medication Error:

- 674 medication errors / 351 admissions
 - incidence of 19.2 per 1000 medication doses, 109 per 1000 patient-days, and 32.53 per 100 medication orders
- 305(45.3%) - occurred in the critical units
- The most common types of medication error detected
 - Improper dose, 196(29.1%)
 - Wrong administration technique, 134(19.9%)
 - Dose omission, 132(19.6%)
 - Wrong frequency of administration, 67(9.9%)

Three hundred sixty-six (54.3%) of the 674 medication errors identified occurred at the administration stage of medication use process, 271(40.2%) at prescribing /ordering.

Factors associated with AEDs PADEs and MEs in hospitalized children:

- For adverse drug event
 - presence of infectious disease ,
 - use of Antihistamines and anti allergic
 - use of CNS medicines
 - use of Endocrine medicines
 - LOS
- Length of hospital stay is associated with ADEs
 - The odds for occurrence of ADEs among Children with length of stay greater than 23 days was 8 fold times than children with less than 9 days of length of stay in the ward (95 % CI ,2.934 -22.038)

Regarding factors associated with PADEs and medication error:

- The number of medications ordered, (6 – 10 medication, AOR , 3.27 (95% CI 1.68, 6.36) vs 1 – 5 meds)
- The use of GI medicines (AOR , 3.84 (95% CI, 1.28 – 11.5)
- Presence of CNS disorder AOR, 11.16 (95% CI, 4.18 – 29.79).

Factors associated with MEs:

- Los (p<0.001)
 - Children with Los in between 16 - 22 days have 6.2 fold times higher odds for experiencing medication error than in between 1 up to 9 days of length of hospital stay (95% CI, (3.087-12.525)

Question raised and the response given:

What help was given to those who suffered adverse drug events? Response: Health care givers malpractices need to be addressed.

Conclusion: Adverse drug events are common in Hospitalized children and almost one third of ADEs were found to be preventable; most of the ADEs found cause temporary harm to the patient that required intervention but considerable number of hospitalized children also suffered medication related permanent harm. Potential adverse drug events and medication errors are very common.

Furthermore, improper dose was the most frequent types of medication error followed by wrong administration technique and that administration/ordering stages were common stages at which medication errors had occurred. Some risk factors were identified with ADEs, PADEs & MEs

Recommendations: incorporation of ward based clinical pharmacists into patient care teams and the recommended interventions included: developments of standardized dosing guidelines in neonates and infants, developing infusion therapy protocols, IV admixtures & compatibility protocols and it is important that nurses double check protocols in administration of high risk medication.

The recommendations also included: targeting hospitalized children for adverse drug event with extended length of hospital stay, receiving central nervous system and endocrine drugs, improved communication between physicians , pharmacists and nurses, and

Provide continuing education to nurses, pharmacists and physicians on medication safety as well as patient safety concepts.

Finally the researcher concluded his discussion by recommending in the long run, hospital administrators to think of implementation of information technology including computer physician order entry and for further similar studies to be conducted in other parts of the country to know the burden of the problem at large and to identify the root cause of the medication error.

Presentation 138: “Patients ‘Rights Framework in Health Care Service: A Literature Review on the Application of Human Rights to the Delivery of Patient Health Care”, by Adugnaw Berhane and et. Al.

Quoting different sources including UN Agencies, the presenter, in his introduction, explained at great length the various legal instruments aimed at enhancing rights for safe, effective and efficient health care for the patients

The objective of this literature review is to elucidate the patient right framework to health care and analyze the Ethiopian Constitution related to patient rights.

This review employs legal analysis of the major international human rights related provisions & the Ethiopian constitution. These expressions and components of health rights are found in internationally recognized sources of international law, including: formal international law (international treaties and conventions), “soft law” (non-binding declarations), and the Ethiopian Constitution

Ratification of International Human Rights Treaties by Ethiopia

- The human rights architecture at the international levels provides an important formal and procedural framework for addressing abuses of human rights in patient care.
- This legal framework creates a number of specific mechanisms that can be utilized to hold abusive governments and state actors accountable.
- Here below is a summary of ratification of major human right treaties by Ethiopia.

Patients’ Rights Framework

- Within the many treaties and instruments that make up the international human rights system, a great number of provisions can be and have been applied to the context of patient care.
- Below is a condensed overview of the relevant Patients’ Rights Framework that can be applied in patient care.

1. Right to the Highest Attainable Standard of Health

This is recognized in Article 12 of the ICESCR and other treaties. Under the UN regime, this right obliges states with a number of affirmative duties, for the implementation of effective measures for treatment, prevention and control of disease. (ICESCR, 1966)

- These rights are itemized in a variety of sources, including Article 12 of the ICESCR .(CRC, 1989; CRPD,2006).

2. Right to Liberty and Security of the Person

- The International Covenant on Civil and Political Rights (ICCPR), the Convention on the Rights of the Child (CRC), and the Convention of the Rights of Persons with Disabilities (CRPD) are among those treaties that have elaborated the right to liberty and security of the person and whose enforcement bodies have applied this right to the context of patients' rights.
(ICCPR, 1966; CRC, 1989; CRPD, 2006)
 - This is also mentioned in the Ethiopian constitution **Article 16**; Everyone has the right to protection against bodily harm and **Article 17** of the Ethiopian constitution states as: No person may be subjected to arbitrary arrest, and no person may be detained without a charge or conviction against him and No one shall be deprived of his or her liberty except on such grounds and in accordance with such procedure as are established by law.
3. *Right to Bodily Integrity*
- Another important patient right is the right to bodily integrity, which is specifically guaranteed by the CRC, CRPD, and World Medical Association (WMA) Declaration on the Rights of the Patient.
(CRC, 1989; CRPD, 2006; WMA, 1981)
 - This right is closely related to the bioethical principle of autonomy and focuses on self-determination, informed consent, and freedom from unwanted medical intervention.
 - It has also been interpreted to be part of the right to security of the person, the right to freedom from torture and cruel, inhuman, and degrading treatment, the right to privacy, and the right to the highest attainable standard of health. (ICCPR, 1966).
4. *Right to Freedom from Torture and Cruel, Inhuman and Degrading Treatment*
- The right to freedom from torture and cruel, inhuman, and degrading treatment is covered under a number of international treaties, including the Convention against Torture (CAT), the ICCPR, the CRC, and the CRPD. (CAT, 1984; ICCPR, 1966; CRC, 1989; CRPD, 2006)
 - Legal provisions related to this right include the right to adequate pain relief. (ECPR, 2005).
5. *Right to Privacy and Confidentiality*
- The realm of essential patient protections is the right to privacy and confidentiality as it applies to health information.
 - This right is covered under a number of international treaties as well as by supplemental provisions of the ICESCR and non-binding international instruments, such as the World Medical Association (WMA) Declaration on the Rights of the Patient. (ICCPR, 1966; CRC, 1989; CRPD, 2006; ICESCR, 1966; WMA, 1981).
6. *Right to Life*
- The right to life has a specific meaning in the context of human rights in patient care related to the state responsibility to provide for and continuously improve health care services.
 - This includes care for members of marginalized or criminalized groups or the disabled, whose lives may be seen as having less value in some settings, or are at risk as a result of arbitrary denial of health care services.
 - Beyond merely imposing a government duty to respect life, this right is also understood to extend to the duty to provide citizens the conditions for a life with dignity.
7. *Right to Non-discrimination and Equality*
- In emphasizing universal and equal access for all people, the right to non-discrimination and equality represents a key component of human rights in patient care.
 - Provisions that elaborate this right create special protection and enforcement mechanisms for marginalized groups, including racial, gender, and other minorities, women, people living with HIV/AIDS, disabled persons, children, and migrants, among others. (ICCPR, 1966; CEDAW, 1979; CDESCR, 2004; CRPD, 2006; CRC, 1989; CMW, 1990).

- The ECHR flatly prohibits discrimination on “any ground such as sex, race, color, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status”. (ECHR, 1995).

The presenter described the conclusions and implications of the paper as follows: Bioethics has traditionally been concerned exclusively with protecting patients and research participants; the international human rights framework takes a wider scope to encompass other key stakeholders, including health care providers.

Patients and health service providers both require support to identify, prevent and seek redress for violations of human rights in health care settings. These are further exacerbated by vulnerability due to ethnicity, gender, and other socioeconomic factors.

Ethiopia incorporates most of the patient's right to health care and its key elements as fundamental rights in the constitution.

This review will also give a framework to study patient rights in the Ethiopian context.

Major topic: Nutrition (under this major topic, presentation numbers 139, 140, 141, 142, 143, 144 will be discussed)

Moderator: Prof. Tilahun Teka

Presentation 139: “Assessment of Aflatoxigenic *Aspergillus* species in Food commodities from local market of Addis Ababa”, by Negero Gemedo and et. Al.

In his introduction, quoting different sources, the researcher said that *Aspergillus* are major problems of public importance ; in Africa aflatoxins are mycotoxins of public health importance and that 250,000-hepatocellularcarcinoma related deaths occur in Sub-Saharan Africa.

The presenter went on to say: among the genus of *Aspergillus*, only a few well known species were recognized as important pathogens of humans and of these, over 95% of all infections are caused by *Aspergillus fumigates*. Some other species of clinical importance include: *A. nidulans*, *A. terreus*, *A. oryzae*, *A. ustus* and *A. versicolor*.

Speaking about the significance of the study, the presenter said that *Aspergillus* are the major public health and agroecoomic threats. Consequences are severe in Ethiopia; Food supply is limited and the mycotoxin hazard is exacerbated in that Mycotoxin-containing foodstuffs are consumed and malnutrition enhances the susceptibility. Hence, Continuous assessment of the risk of exposure to aflatoxigenic *Aspergillus* species was needed

The general objective of the study is to assess the occurrence of Aflatoxigenic *Aspergillus* species in food commodities collected from Addis Ababa and the specific objectives are to isolate *Aspergillus* species from food commodities, to evaluate the magnitude of food contamination and to assess aflatoxigenic potentials of *Aspergillus* strains isolated from foods commodities in Addis Ababa.

A total of 108 food commodities, 18 samples from each kind of food commodities, peanut, paflour (shiro), barley & emmer flour (besso and mittin aja), cookies, maize and roasted barley (kolo and senef kolo) were bought from markets within Addis Ababa. The sample processing was 0.25-1kg of each sample was bought, aseptically taken with paper bag covered with plastic bag and codes was given to each sample, transported to the laboratory and kept in the refrigerator (4 to 8°C).

Each sample was aseptically sub-sampled (25gm); Dilution plating and/or direct plating methods were used; serial dilutions of food samples were prepared and the samples were seeded in PDA and SDA. After incubation the plates were observed for the presence of growth of visible fungal colonies. After sub-culturing the suspected *Aspergillus* species, Macroscopic and Microscopic Keys were used for identification of the isolates. The study period was November 2011 to May 2013.

Aspergillus flavus was the most predominant species contaminating mainly maize and peanuts:

- Not having been processed and stored in appropriate conditions.
- Poor harvesting & storing conditions
- Grow at large range of temperature,
- Colonize almost all food commodities

Aspergillus species that produce aflatoxin are increasing because of favorable environmental condition, poor harvesting practices, improper storage, and less than optimal conditions.

Conclusions and Recommendations: According to the presenter, the result of the study conducted to evaluate the presence of toxigenic strains of *Aspergillus* species in food commodities in Addis Ababa, has indicated the existence of these strains. *Aspergillus* was more frequently isolated from peanut food samples; peanut and maize were highly infected by toxicogenic *Aspergillus* species and *Aspergillus flavus* was the most aflatoxin producing species isolated from food commodities from Addis Ababa. *Aspergillus* and their mycotoxin are the growing threat to the health around the world, Ethiopia is not exceptional.

Hence, tests to detect and diagnose them need to be adopted in the country-quantitative examination of aflatoxin exposure (hepatocellular carcinoma, impaired growth and acute toxicity). There should be control and regulation mechanism to limit the consumption of food contaminated by aflatoxigenic *Aspergillus* species and aflatoxin. Further study is required on other toxigenic organisms that contaminate food commodities-quantitative method and in the field condition-to identify other toxin (other than aflatoxin).

Questions raised and answers given:

1. Which aflatoxin? Response: *Aspergillus* species.
2. How about contaminated vegetables in AA? Response: It is also a concern and need to be taken up by EPHA in regard to prevention.

Presentation 141: "Outcome of severe acute malnutrition and associated factors among children aged 6-59 months admitted to stabilization center, in Dollo Ado refugee camp, Somali region, Ethiopia," by Solomon Chane

Solomon defined Malnutrition as a condition that results from an imbalance between dietary intake and requirement. It includes both under and over nutrition and severe acute malnutrition as a very low weight for height < -3 Z scores of the median WHO growth standard or < 70% of the reference median or the presence of bilateral nutritional pedal edema or mid-upper arm circumference < 115mm. This, according to the researcher, is a definition made by WHO

Globally an estimated 12 million under five years children die each year, over half of the death attributes to Malnutrition said the presenter, adding, in Dollo Ado Refugee camp, the prevalence GAM and SAM among under five years children ranges from 30-40% and 12 to 18%, respectively

The rationale of the study was: survey conducted in Dollo Ado refugee camp showed persistent critical level of malnutrition and under five mortality. However, little studies have been done to identify factors contributing to death among SAM children in the refugee communities. Therefore, getting good evidence on outcome of SAM children and associated factors would help in identifying children at higher risk of death and provision of proper care to reduce high mortality in inpatient care. The general objective of the study was to determine mortality rate and associated factors of severe acute malnutrition on survival of SAM children aged 6-59 months admitted in stabilization center in Dollo Ado refugee camp while the specific objectives were to determine survival rate in severely acutely malnourished children and to assess the factors associated with survival among severely acutely malnourished children.

Method: the study design retrospective longitudinal study and study population included all children aged 6-59 months old with complicated SAM admitted in selected stabilization centers from August 2011 to September 2012. Inclusion criteria was SAM children with medical complications aged 6 to 59 months old admitted in SC from August 1st 2011 to September 30th 2012. The exclusion criteria was children who did not have complete record of date of admission and date of exit and outcome variable.

Sample size (SS) was calculated separately to address the different objectives and the highest SS was taken as a final sample size. Kaplan-Meier technique was used to construct survival probability among baseline variables and Log-rank test was used to compare differences in survival probability.

Profile of the study population: 1054 (99.2%) had complete record of outcome variable, 53.4% were boys while 46.6% were girls, Median (IQR) age of the study subjects was 24 months (12-36), 93.4% were new admission, 5.6% were readmission and 1% were relapse and 88.2% of the children were referred from outpatient therapeutic program (OTP).

Baseline Characteristics:

- Nutritional status: 80.6% Marasmus, 14.9% Marasmus-Kwashiorkor and 5.5% Kwashiorkor. Admission weight ranges from 2.5kg to 14kg with median (IQR) of 6.5kg (5.5- 7.8 kg)
- Common medical complications seen at admission: 560 (53.1%) had acute respiratory tract infection, 509 (48.3%) had anorexia, 374 (35.5%) had fever, among children with diarrhea; 34% severe dehydration and 9.9% moderate level of dehydration.

Outcome status:

- Overall incidence of mortality was 1.03 deaths/100 persons-days observation
- 16.5% of the deaths occurred within 48 hours of admission, 39.1% occurred within a week and 73% occurred within 2 weeks after admission
- The median (IQR) length of stay before discharge was 8 days (6-12 days) and for those died it was 9 days (5-16 days).

Mortality rate was higher among children with:

- Marasmus- kwashiorkor (AHR= 1.7, 95%CI: (1.07, 2.69)) compared to those with Marasmus only,
- Acute respiratory tract infection (AHR= 1.53, 95%CI, (1-2.69),
- MUAC: < 90mm (AHR= 2.69, 95% CI, (1.06-6.82), 90-109.9mm (AHR= 2.53, 95%CI, (1.18- 5.43) and 110-119.9mm (AHR= 2.23, 95%CI, (1.07-4.69) compared to those with MUAC >120mm,
- Diarrhea (AHR= 141.9, 95%CI: (34.3, 586.2),
- Some or severe level of dehydration (AHR= 8.48; 95%CI, (5.21, 13.59) and AHR= 7.97; 95%CI: (4.13, 15.39) respectively compared to those with no dehydration.

Conclusions: The mortality rate in SC, 10.9% is higher compared to many studies done in Africa as well as the acceptable rate set by the SPHERE and WHO standard. Diarrhea, ARI, some or severe dehydration, and MUAC less than 120mm at admission were independent predictors of mortality among SAM children and children admitted with diarrhea, dehydration, MUAC <120mm and children who received IV fluid have less chance of survival compared to those without the factors

Recommendations: More efforts have to be done to reduce mortality in SAM children to keep the rate at the level set by the SPHERE and WHO and close follow up and frequent monitoring should be carried out for children admitted with the above medical conditions in order to reduce the high risk of death in this group. Furthermore, future prospective cohort study is recommended to identify relationships between other important factors such as HIV, social and economic status in order to evaluate their effect on mortality.

Questions raised and responds given:

- How come diarrhea per se is separated from dehydration when you tried to analyze the data? Both moderate and severe dehydration were found to be predictors of mortality.

Presentation 142: “Stability of infant and child feeding index overtime, implication and its association with nutritional status of HIV exposed infants in Sidama Zone Southern Ethiopia”, by Demewoz Haile and et. Al. The presenter started his discussion by explaining the justification for the study. According to him, efforts made to measure and quantify the adequacy of complementary feeding practices and to assess the strength of association with nutritional status have been very limited due to methodological problems. The summary index developed in the present study is an exploratory attempt to summarize and quantify the key complementary feeding practices into a composite index. There were also studies which show the importance of summary index in research and advocacy.

However, there is no study on the stability of summary index overtime, its association with nutritional status and implication for monitoring and evaluation of programs.

The objective of the study is to assess the stability of summary index overtime, implication and its association with nutritional status of HIV exposed infants in Sidama Zone, Southern Ethiopia.

A panel study design was conducted in health institutions with ART and PMTCT services in Sidama Zone, SNNPRS, from February to July 2012. Three repeated measurement of data were collected from each HIV exposed infants. Descriptive, bivariate and multivariable linear regression analyses were performed to assess the associations between infant and child feeding index and nutritional status of HIV exposed infants. The association between the rate of growth and the longitudinal feeding index was measured by the mixed effect model analysis. The stability of the index was assessed by using the variance of the repeatability coefficient (RC). Cochran Q statistics was used to evaluate whether there was a statistically significant difference in feeding practices and nutritional status across the repeated visits.

One hundred eighty four HIV positive mothers having HIV exposed infants of age 6-17 months participated in the study at the baseline. The total numbers of participants at the second visit were 148 and at the third visit were 124. There was no significant difference between lost to follow ups and the remaining sample at visit one: Anthropometric z-scores, mean summary index score and socio demographic characteristics except age.

The study showed that the index was stable. The value of repeatability coefficient (RC) was 0.802 (95% CI: 0.749-0.846).

This showed that the index reflects an averaging of changes in individual component practices (Global benefit). In this study WLZ was not significantly associated either with CS-ICFI or L-ICFI.

Conclusion: Above half of the infants had no optimum complementary feeding according to L-ICFI and that the summary index was stable over time which makes feasible to create L-ICFI using the several CS-ICFI. The difference in WAZ and LAZ score between the low and high tertiles of the index was biologically meaningful.

The researcher made recommendations to the FMOH, the RHB and the Zonal Health Department that the L-ICFI could be used for evaluation of complementary feeding program intervention but not for monitoring.

Finally, the presenter concluded his discussions by giving a hint for researchers to conduct further study on the association between ICFI and micro nutrient status among HIV exposed infants, to study with a longer time interval between follow-ups to investigate the association between feeding index and linear growth and to further investigate the association between ICFI and diet quality based on quantitative dietary methods.

Presentation 143: “Is the adapted household food insecurity access scale (HFIAS) developed internationally to measure food insecurity valid in urban and rural households”, by Seifu Hagos et. Al.

The objective of the study is to assess the validity of the Household food insecurity access scale (HFIAS) developed to measure the access component of household food insecurity.

The design is repeated cross sectional study. The study is conducted in urban and rural villages of Butajera district, Southern Ethiopia. Households were selected using a simple random sampling method. The HFIAS tool was translated into local Amharic language and tested for face validity. The tool was evaluated for its internal consistency by Cronbach's α and factor analysis.

The validation study was conducted on a pooled sample of 1516 households.

HFIAS item response curves were parallel across wealth status in sample HHs. Dose response trend between food insecurity level and the likelihood of previous day food consumption was observed. The overall HFIAS score did not change over the two rounds of data collection period.

Conclusion: HFIAS tool is a simple and valid tool to measure the access component of household FI in this setting.

Presentation 144: "Prevalence and determinants of exclusive breastfeeding practice among infants during the first six month in Jimma town", Southwest Ethiopia, by Getasew Assefa et. Al.

As background information, the researcher said that breastfeeding is an important public health strategy for improving infant and child morbidity and mortality, maternal health condition as well as helping to control health care costs. Despite the demonstrated benefits of breast milk, the prevalence of exclusive, breastfeeding, in many developing countries including Ethiopia is lower than the international recommendation of exclusive breastfeeding for the first ix months.

The objective of this study was to determine prevalence of exclusive breastfeeding and to identify its predictors during the first six months of life in Jimma town, Southwest Ethiopia.

Institutional based cross-sectional study was conducted from January to February 2013 among mother infant pairs attending Jimma town health institutions. Quantitative data were collected from 422 mother infant pairs through pretested structured questionnaires. It was supplemented by qualitative data generated through focus group discussions among purposely selected mothers and health professionals. The data were entered by Epidata and analyzed through SPSS version 16 and thematic grouping. Bivariate followed by multivariable logistic regression model was applied to identify independent predictors of exclusive breastfeeding practice.

Even though all newborns should be exclusively breast fed their infants for the first six months, the crude prevalence of exclusive breast feeding in this study was 60.1%. In multivariate analysis infants at younger age (≤ 2 months) are 2 times more likely to be exclusively breastfed as compared to infants above 4 months.

Additionally short birth interval/spacing as the case of developing country including Ethiopia reduces the duration of exclusive breast feeding of infants in the first six months.

This idea was supported by the qualitative finding as follow:

"A woman having a 5 months aged infant stated ...I started to gave other foods besides breast milk after 4 months since his age was four months whereby breast milk alone was not enough."

On the same issue a nurse from JUSH stated "..... some mothers argued to give breast milk alone in the first six months because they think that breast milk alone may not be enough for their infants unless they provide additional foods accordingly".

Being lower parity was positively associated with exclusive breastfeeding practice. Whereby mothers having two and below children were more likely to practice exclusive breastfeeding practice. This might be due to mothers having few children were more concerned and worried about their infants since they have high passion unlike the one who have many children.

A focus group discussant mother stated that ..."we provide breast milk alone for six months at first delivery since I spent most of my time at home with my infants since I love him too much".

But after the second child the responsibility to lead my family becomes too high and I began to work different activities to support my families and hence breast feeding alone for the first six month is impossible and challenging.

Mothers having antenatal care (ANC) visits were more likely to practice exclusive breast feeding which was in line with a study done in

Positive perception about the adequateness and balanced nature of breast milk alone for the first six month was positively associated with exclusive breastfeeding practice.

A mother from the qualitative group discussion group stated that...*"supplementary foods were given because women and elders in the family perceived that mother's milk is not sufficient for the child after the age of 3-4 months"*.

Questions raised and responses:

- *Is it possible to compare hospital based data with EDHS? Yes, it is possible.*
- *Have you seen proportion of pre-lactated feeding? Not seen.*

Major topic: Maternal Health

Moderator: Dr. Assefa Seme

Presentation 145: "Factors affecting the Utilization of Reproductive Health/Family Planning Services in the South and North Wollo Zones of Amhara National Regional State", by Setegn Tigabu.

In the introductory part of the paper it was explained that EPHA, through the support of Packard Foundation, has been implementing a project to strengthen the link between households and primary health units in South and North Wollo zones of Amhara National Regional State. But still, both the coverage and utilization of the services were below the desired level.

The objectives the study were to determine the utilization rate of contraceptive methods/FP methods, to identify the preferred contraceptive methods and the retention rate of long acting contraceptives like implanon and to find out the underlying factors that impede/affect the utilization of the ongoing reproductive health/ family planning services in the EPHA project areas.

The study was both community and facility based. A cross-sectional study design with both quantitative and a qualitative method was employed. The study population of the community survey was women in the reproductive age group (15-49 years) and the facility based survey included health posts of the selected kebeles, nearby health centers and hospitals. Facility managers/heads and health care providers were sources of the data.

Using multistage sampling method, 1,554 women in the reproductive age group were involved in the study. In addition service providers and managers/heads of the facilities were key informants for the qualitative part of the study.

The results were overall 68% and 67.2% of the proportions of women were from South Wollo, and urban part of the zones respectively. The current contraceptive utilization rate for both zones was 68 %. About 70% of the respondents mentioned health extension workers as their source of FP information. About 40% preferred to have four children and 21% three. Eighty six percent had demand for family planning and of these, 18% had unmet needs.

Injectable was reported as the most (68%) commonly used method. Majority (78%) of the respondents expressed that their last pregnancy was not intended for. Ninety percent have heard Implanon and 23% had ever used. Of the total insertion performed, 80% have currently the method intact and only 20% had it removed. Reasons for Implanon removal included side effects (35%); end of potency (32%), the need to have more children (17%) and others (17%).

Occupation and ever heard of information from any source (previous knowledge) about family planning had direct association to utilization. Most of the health extension workers (HEWs) have received in-service training on family planning including implanon organized by Woreda Health offices in collaboration with partners and EPHA. Awareness activities have been performed.

In conclusion it was noted that accessibility of services and performance of HEWs has improved, specifically on implanon insertion. Individual and peer group counseling for mother and couple were widely

practiced, the knowledge on the use and importance of FP/RH has been steadily improving and the demand for utilization of implanon was steadily increasing.

Based on these findings the following recommendations were made:

- Increase the availability of long-term contraceptive methods particularly implanon as it is provided by HEWs at community level,
- Strengthen the capacity and competence of service providers especially HEW so as to ensure quality and sustainability of the services, and
- Strengthen all efforts to expand LAFP methods mainly implanon.

Questions raised were:

1. *Why high CPR (68%) versus high unintended pregnancy?*
2. *Why do you recommend focus on Implanon use when it is the choice of people to choose the methods?*

The responses: These were the findings but need to be further studied and Implanon was recommended because the majority of the beneficiaries live at distant places from the service areas.

Presentation 146: “The Effect of Maternal Helminth Infection on Maternal and Neonatal TB Specific Immunity,” by Dawit Gebreegziabiher et. Al.

As an introduction, quoting various sources, Dawit said that TB is one of leading cause of morbidity and mortality and that one in every three person carried the bacteria and is at risk to develop active. Every year, about 8 million new cases and 2 million deaths occur. Helminth co-infection is very common in developing countries; millions of eggs are produced per day accompanied by equivalently copious amounts of secretory and excretory products in the host.

During pregnancy, these products cross the placenta and potentially down regulated the fetal immune system, mainly CMI and that major immunity against TB is cell mediated immune response. T_H1 cells play critical role mainly mediated by producing IFN- γ ; humeral immune response and fixation and complement mediated phagocytosis.

The presenter went on to say: the host immune response against helminth is humeral response- T_H2 (IL-4, IL-5, IL-10) cytokines and consequently develops strong IgE. Such immune responses down regulated cellular arm of the immune system which is important for TB infection containment- increases the susceptibility of the host to TB

The general objective of the study is to determine effects of maternal helminth infection on the performance QFT-GIT and neonatal immunity.

The location of the study is Mekelle hospital, Semen Health Center and Ayder Referral Hospital, Mekelle, Ethiopia. Eighty five pregnant mothers at the last week of the 9th month were enrolled from the above health facilities. Study design was Cross-sectional using convenient sampling technique.

The prevalence of helminth infection in pregnant women was 27%, of this 30% was due to schistosoma mansoni and 8% was due to other protozoan parasites. Among the total of 85 study participants 26.8% were QFT-GIT positive and 17% had indeterminate result. Mean total IgE value of cord blood was significantly higher in helminth positive than negative mothers (0.76 Vs 0.47, $p=0.042$). Cross placental transfer of TB specific IgG was significantly higher in helminth positive (21.9 ± 7.9) than negative (12.3 ± 5.1), $p=0.002$ LTBI positive participants. IFN- γ response of CBMCs to ESAT-6/CFP-10 cocktail (50 Vs 116, $p=0.0$ Vs 123, $p=0.02$) was significantly lower in helminth positive than negative participants. There was no statistically significant difference in IL-4 response of CBMCs from helminth negative and positive participants.

Conclusion: Helminth infection had a statistically significant impact on the performance of QFT-GIT assay in pregnant mothers. Maternal helminth infection significantly affected the total IgE values of cord blood and significantly increased the cross transfer of TB specific IgG in LTBI positive participants and maternal

helminth infection down regulated the CBMCs IFN- γ response to MTB Ags but IL-4 response did not observe significant difference between helminth positive and negative.

Presentation 148: Determinants of unmet need for contraception in Ethiopia: Evidence from Ethiopian Demographic and Health Surveys (EDHS), by Tefera Darge

As a background information, the presenter pointed out that in 2012 about 222 million women in developing world have unmet need for modern contraception and that the highest proportion of married women (31%) with unmet need is found in sub-Saharan Africa. The need of contraception is increasing due to the growing number of reproductive age women and the growing desire to have smaller families and control over the timing of births.

He observed that meeting unmet contraceptive needs would help to prevent unintended pregnancies, avert unplanned births, ward off abortion, reduce maternal death and save cost for achieving MDGs. Satisfying unmet need in Ethiopia by 2015 would help to save lives of about 13,000 mothers; and >1 million children achieve the national population policy (TFR of 4 children)

Justification for the study: Identifying determinants of unmet need would help to design effective programs to reduce the existing high level of unmet need, estimate the future demand of contraception, estimate the impact on fertility if the additional demand is met and it has important implications for future population growth.

Methodology: the Data source is the Ethiopian Demographic and Health Surveys (EDHS), particularly EDHS 2011. To identify determinants of unmet need for contraception (unmet need for spacing and for limiting), 8561 women – currently married/living with partner were considered and for data analysis multinomial logistic regression was used.

Accordingly, 18% of women have unmet need for spacing and 9.6% for limiting. Age, educational level, number of children and religion are significant determinants of unmet need for spacing and or limiting. In addition, place of residence is determinant for spacing while age at marriage and knowledge of contraceptives are significant for limiting.

Conclusion and Recommendations: Though unmet need for contraception is declining, it is far from satisfying the existing demand. Hence, there is a need to ensure women's empowerment through education and job creation; expand accessibility and availability of contraceptive methods, engage community and religious leaders to promote FP. In addition, FP programs should take into account the needs for spacing and limiting differently.

V. Poster Presentations

In addition to the series of oral presentations, about 140 poster presentations were also displayed at the corridors of the new African Union Assembly Hall. The research works, selected based on the criteria set by the nomination committee, were visited and observed by the Guest of Honor, H.E. Dr. Keseteberhan Admassu, Minister, FMOH, other invited government officials, representatives of development partners, local and international organizations, members of EPHA and other conference participants.

The topics covered by the oral presentations were Malaria, Adolescent Health, HIV/TB, Nutrition, Child Health, Maternal Health, Outbreak, Health Care Financing and Laboratory.

Detailed information on the poster presentations can be obtained from the Abstract Book prepared in connection with the Silver Jubilee Anniversary of the Ethiopian Public Health Association.

VI. BUSINESS MEETING

This session, which was held in the afternoon of the three-day conference, was presided over by the chairman of the General Assembly, Dr. Teshome Gebre, the Deputy Chairman of the GA, Dr. Hailu

Yeneneh and its Secretary, Dr. Almaz Abebe. In his capacity as the chairperson of the GA session, at the outset, Dr. Teshome said that only regular members of EPHA were entitled to attend the meeting and after announcing the existence of a quorum, he invited his deputy, Dr. Hailu to present the draft agenda of the day to the participants. Accordingly, Dr. Hailu presented the draft agenda as follows.

1. Presentation and discussion of activity report
2. Presentation and discussion of external audit report
3. Election of new EB members
4. Any other business

One participant suggested that in view of its complexity and seriousness, issues related to the construction of the future EPHA office be considered as a separate agenda. The idea was accepted but was not discussed as suggested because of time constraints. The draft agenda forwarded by the Executives of the GA was discussed unanimously and approved with some modifications by the participants.

Following the approval of the agenda, Dr. Teshome invited Dr. Assefa Seme to present the annual activity report of EPHA.



The major components of the annual activity report of EPHA covering the period from January 1 to December 31, 2013 were presented by Dr. Assefa as follows. The report highlights the achievements made in diverse fields and challenges encountered during the period under review and plans for next year.

6.1. Annual Performance Report

6.1.1. Project Management and Long Term Training Programs

- CDC PROJECT: Improving HIV/STI/TB Related Public Health Practices and Service Delivery

The major activities and employees of EPHA are financed by the CDC project. It covers more than 60% of programs and HR costs. The project has many program components which are being implemented in collaboration with different partners.

The major components and activities of the CDC project are:

- Generating and implementing strategic information-SI
- Ethiopian Field Epidemiology training program- EFETP
- Leadership in strategic training program-LSITP
- Support university-based demographic and health surveillance and mortality surveillance sites by Addis Ababa, Jimma, Gondar, Haramaya, Arba Minch and Mekele universities
- Support the Ethiopian Public Health Laboratory Association, MOH, EHNRI, HAPCO
- Expand and strengthen HIV/AIDS prevention, care and treatment of most at risk populations (MARPs) including men who have sex with men (MSM)

- Support standardizing basic care package and opportunistic infection (OIs) research programs in Ethiopia.
- Support youth leadership in a multi-sectoral approach in preventing multiple concurrent sexual partnership-implemented by Save Your Generation Ethiopia (SYGE)
- Promotion on alcohol and substance abuse in Ethiopia in relation to HIV/AIDS; and
- Support production and distribution of publications.

The goal of the project is to improve public health practice and service delivery in the area of HIV/AIDS prevention and control in Ethiopia by conducting public health evaluations, operations research and by developing the capacity for designing and implementing evidence-based policies and interventions. The five-year project is now coming to an end. It will run only up to March 30, 2014 and a new five-year proposal has been submitted to CDC to ensure the continuation and success of the project. All CDC project components and programs were under implementation during the reporting period.

- **ETHIOPIAN FIELD EPIDEMIOLOGY TRAINING PROGRAM (EFETP)**

The EFETP began in 2009. It is a competency based two-year training and service program in applied epidemiology and public health aimed at building capacity to strengthen the surveillance and response system in Ethiopia.

The number of graduates from three cohorts was 48 and the 4th cohort residents are 16 and all are undertaking their residence in their respective field bases. In 2013, the program has enrolled 16 residents for cohort 5 from Oromia, Amhara, SNNPR, Addis Ababa, Somali, Benishangul Gumuze Regional States and the Ministry of Agriculture and Ministry of Defense. At present almost all the 9 regional states and the two administrative cities have at least one EFETP graduate.

In addition, assessment has been conducted for site expansion- five field bases (FB) strengthened, one FB established, five short term training programs organized and 5th AFENET conference organized.

Challenges encountered in the process of implementing the program were shortage of vehicles and low quality mentorship.

- **LEADERSHIP STRATEGIC INFORMATION (LSI) TRAINING PROGRAM**

This is a long-term training program implemented to improve the capacity of regional public health personnel to organize and use strategic information for planning, monitoring and evaluation of HIV/AIDS interventions.

In this regard, five cohorts of training were organized in 2013 and 67 graduated in the same year and the 12th cohort training program is in progress. A meeting was held with RHB to discuss the progress and an assessment made to explore the potential of other universities for expansion. Besides, an information bulletin, a mentorship guide, and training materials were produced and printed.

- **HEALTH DEMOGRAPHIC SURVEILLANCE SITE (HDSS)**

Health Demographic Surveillance Site is a longitudinal surveillance system established by universities of Ethiopia in different geographic areas of the country to generate health and demographic information. The network of these sites has been coordinated and supported by EPHA since 2007.

In the health and demographic surveillance (HDSS) component of the CDC supported projects, the network of the surveillance sites has accomplished the following major activities during the reporting period.

- DSS and VA reports were produced and published, produced and published data sharing policy, Strengthened GIS unit of two sites (Jimma and Mekele universities), registered vital events and assigned causes of death, Data migration to HRs data base was accomplished – for Butajira (Buta) and Haromaya (KDS), Data quality assurance meeting and site visit were conducted as well as assessed potential of other universities for expansion

Challenges faced by the HDSS sites included lack of vehicles, turnover of field and trained project staff.

- **NATIONAL MARPS SURVEY**

The overall aim of this project is to establish a surveillance system to monitor HIV prevalence and related risk behaviors among key populations and to increase the availability of information to adequately inform national HIV prevention and control efforts in the country.

The following activities were accomplished during the reporting period.

- Collection of distance drivers (DDs) bio-behavioral data from four transport corridors is 100% completed
- Size estimation and Bio- Behavioral (BB) data of FSW collection completed -10 cities, AA is under operation
- Recruitment, training and deployment of supervisors and data collectors
- Procurement of equipment, lab reagents, and supplies and logistic support.

- **Risk Surveillance among MSM (Surveillance of risk behaviors among MSM in AA)**

The general objective of this project was to assess the extent of behavioral risk factors for HIV infection, HIV prevalence and STI prevalence among men who have sex with men (MSM) in Addis Ababa.

As planned, data collection has been completed, the final report of the study is received and results discussed among key stakeholders. Discussion with the MoH and policy makers is expected to take place in the near future. Organizing dissemination workshop is yet to be done.

- **Support to other organizations**

- **Support to Federal HAPCO and the Ministry of Science and Technology**

As planned, two M&E officers were recruited and assigned to HAPCO. Likewise, furniture and equipment were procured and provided to the Ministry of Science and Technology Institute Review Board (IRB).

- **Support to Ethiopian Public Health Laboratory Association (EPHLA)**

Most of the activities planned for the year were accomplished. Accordingly:

- TOT on Lab quality management systems organized, EPHLA's newsletter published, supportive supervision of regional chapters conducted and five lab manuals for undergraduate training published and distributed.
- One of the activities-laboratory safety training- could not be undertaken as planned because of the busy schedules of the trainers at EHNRI. This activity has now been re-scheduled for July 2014.

- **Support to Save Your Generation Ethiopia (SYGE)**

Procurement/supply to strengthen SYGE Information Center and SYGE/EPHA project personnel was accomplished as scheduled. Edutainment programs, club material support, panel discussion, production and distribution of newsletter, brochures, posters, transmission of radio programs and Sony screen spots and TV program sponsorship focusing on youth have all been carried out as planned. Similarly, adaptations and documentation of manuals were carried out.

- **Advocacy on Alcohol and Substance Abuse**

A 15-minute weekly radio program was produced and transmitted via Fana Broadcasting Corporation, a half page column articles were prepared and published weekly on the Amhric *Reporter* newspaper and three episodes of *Tenayistilign* TV show have been aired on ETV. Besides, 13 episodes of TV programs have been produced and are waiting for broadcast on EBS TV.

- **MULU/MARPs Project**

The Goal of this project is to contribute to the Ethiopian national target of reducing new infections by 50% by 2017. The project is supported by USAID and PSI-E.

As planned, staffs were recruited; scope of work developed, Performance Monitoring Plan (PMP), and budget prepared and approved. In addition, national condom strategy was finalized, ToRs for four policy

and desk reviews prepared, participated in 54 Rapid Town Level Mapping process. Work on Data Management and data entry is ongoing.

- **Organization of major workshops**

- **HIV Drug Resistance workshop with WHO conducted**

In this workshop 52 people representing 10 countries participated and the discussions of the workshop were well documented. EPHA has obtained birr 172,844.00 as administration cost.

- **Tobacco Control Workshop with CTFK**

The workshop was successfully organized by EPHA in collaboration with the International Legal Consortium (ILC) of the Campaign for Tobacco-Free Kids (CTFK) and the African Tobacco Control Alliance (ATCA) and conducted successfully from 30 September to 4 October 2013. It was attended by 33 participants from 12 countries. EPHA has obtained birr 240,861.00 as an administration cost.

- **Capacity building project –Future Group**

Meeting with partners on tools and models application was conducted, refresher training on spectrum suite has been carried out and user friendly training manuals produced. Mentorship support to end users is ongoing but supporting five Master theses has not yet been done as planned.

6.1.2. Research, Training (short term) and Publication

- **Research works**

Numerous research works have been carried out during the year under review. Some of the major ones include:

Concept note has been developed to establish research and training advisory group (RTAG), scope of work of the RTAG and research and training facility is being developed, three researches on utilization of FP, MCH and YFHS conducted in Amhara Regional State and RH/FP project baseline survey conducted in Oromia Regional State.

Moreover, desk review on the consequences of FGM in Ethiopia has been conducted in collaboration with EGLDAM. Similarly, a research on prevention of unsafe abortion in Oromia Regional State was conducted by consultants supported by WHO. And finally, a study on the incidence and impact of abortion in Ethiopia is being carried out jointly with Ipas.

- **Publications and Library Services**

During the year under review, EPHA has produced and distributed, on quarterly basis, *the Ethiopian Journal of Health Development* (EJHD), *Public Health Digest* (PHD) and *Felegetena* (newsletter). The Call for Abstract Poster in connection with EPHA Silver Jubilee Anniversary was prepared, published and distributed. Likewise, proceeding of EPHA's last year Annual Conference was prepared, published and distributed to all members and other stakeholders. Furthermore, Calendar of the year 2006 (2013/14) was produced and distributed.

What is more, EPHA has provided technical support in the production and publication of various materials for all projects of EPHA. In 2013, a printing machine was procured though yet to be installed. To meet the need of users, 300 copies of 187 different titles of books, 14 copies of 13 titles of various publication and 40 copies of 14 different titles of journals were collected, organized and documented. Besides, public health was provided to 811 library and internet users. The contents of EPHA web site face book and twitter accounts were also updated. The accomplishment of all the activities cited above, except the installation of the printing machine, is 100% when compared to last year's annual plan.

And finally, a documentary video film on the 13th World Congress on Public Health has been produced and is being upgraded.

- **Training (short term)**

- ▶ 47/60 provided refresher and skill based training for leaders, supervisors and HEW
- ▶ Train youth RH leaders, YFHS providers
- ▶ 4540/6626 HEWs given Implanon insertion training
- ▶ 7/7 orientation and planning workshop organized
- ▶ 124/90 trained on Emergency care (WHO, FMOH, EPHA partnership)
- ▶ 90/90 took TOT on strengthening the Therapeutic Feeding Program (WHO –FMOH –EPHA partnership)
- ▶ 90/90 integrated refresher training on HIV/TB/HIV and EPI conducted (FMOH ,EPHA partnership)

6.1.3. Members Affair and Networking

It was reported that the total number of members has reached 5053 as of December 31st, 2013. In 1992, the number of members was only 44. Currently, there are 24 chapters in different regions which are administered by volunteer focal persons and two core groups in each. Of the total, 12 chapters have furnished and equipped office. Efforts are being made to restructure and build the capacity of the chapters. Guideline for chapters and members has been prepared and discussed while new data base system established and members' data base updated.

EPHA's future intention is to provide skill training and continuing education to members, establish seven additional regional chapters and set up resource mobilization center at regional level for EPHA house construction.

6.1.4. Human Resources

At present, EPHA has 80 employees working at the head office, in the regions and with different partners. During the year under discussion, EPHA has recruited new staff, given promotions, transferred, terminated the contract of some and took disciplinary measures in line with the rules and regulations of EPHA and the Ethiopian labor law. 14 employees have been hired and 6 left. Staff turnover rate was 7.5% during 2013. Salary increment and per diem revision have been made and contract of employment of employees extended to March 31, 2014.

6.1.5. Capacity Building

As part of EPHA's efforts to upgrade the capacity of its staff and others, travels for training and experience sharing including local training programs were organized. Similarly, Short term training and workshops for members, partners and collaborators on research methodology, different computer packages and on health related management skills were given.

Technical supports including recruitment of HR to partners were undertaken.

6.1.6. Finance

It was reported that EPHA's income grew to ETB 91, 441, 559.26 in 2013 budget year by securing funds from different donors such as CDC, Packard Foundation, MSH, PSI, WHO and others. ETB 60,351,170.00 was obtained from CDC, ETB 212,910.00 was collected from members and ETB 30,887,479.26 was secured from other partners.

The total expenditure of 2013 was 88,153,597.36 and the balance was ETB 30, 310, 650.96

6.1.7. Planning, Monitoring and Evaluation (PME)

6.1.7.1. Monitoring and Evaluation System Strengthening

During the year under review, EPHA updated the regular reporting and planning templates, prepared draft M&E procedures for EPHA M&E practices for immediate consumption and TOR for the selection of a consultant has been prepared and based on this a consultant has been selected to prepare the PME guideline. The first draft of the guideline has been completed and submitted. The PME unit has reviewed the draft and final draft is under preparation. The final version will be disseminated within a month.

6.1.7.2. Planning

Planning is the base of EPHA annual activities. It follows a mix of participatory and bottom up planning approaches. Planning begins from implementing partners, implementing units and EPHA departments come up with their annual plans. Joint discussions are held on the proposed activities and one annual plan is prepared based on consensus reached. Accordingly, the following were accomplished during the year under discussion.

Annual plans, carry over plans and no cost extension plans prepared, mid-term assessment of the third SPM made and TOR prepared for ETE. Project monitoring/management plans (PMPs) prepared and preparation for the 4th SPM is in process.

6.1.7.3. Reporting

Quarterly, bi-annual and annual reports on the status of planned activities are collected from different units of EPHA and implementing partners and compiled. In this regard, the activities cited below were undertaken in 2013.

Bi-annual and annual program reports to donors and project specific reports to partners prepared, quarter bases data and information collection and compilation undertaken and comprehensive annual report for publication and wider distribution to members as well as participants of the general assembly carried out.

6.1.8. Construction of EPHA Headquarter

EPHA has secured 885 square meters of land in lease from the government for the construction of its own headquarters right at the heart of Addis Ababa.

To realize the construction of its own headquarters, EPHA has embarked on a series of activities during 2013. Most importantly, cornerstone for the construction of the house has been laid, resource mobilizing officer has been hired and fund raising activities were well in progress. EPHA has obtained the full support of the Ethiopian Government and as part of its commitment; the Federal Ministry of Health has pledged to provide six million ETB to be disbursed in three years and 56 thousand kg iron bar of different thickness and diameter. Employees of EPHA have committed net of their one month salary to the tune of ETB 627,413.00 and each EB member pledged ETB 20,000.00 for the same purpose. EPHA has committed ETB 4.5 million as seed money for the construction of the house. What is more, Core fund raising committee has been established, and geotechnical investigation report submitted to EPHA.

Roadmap for resource mobilization was designed, potential donors/contributors identified and concept note and fund raising proposal prepared and delivered to potential donors and partners.

6.1.9. EPHA support to AFPHA

EPHA is providing the following support to the African Federation of Public Health (AFPHA) which is based in Addis Ababa, Ethiopia.

- Office space with the necessary office furnitures such as tables, chairs, a printer, telephone, fax, internet service, desk top computers, lap top for the program officer, box files, stationary, logistics and others.
- Program officers' monthly salary and other benefit packages

EPHA is also supporting AFPHA in the registration of Member Associations, legal registration of the AFPHA with the FMoFA .

6.1.10. Joint works and participation

In 2013, EPHA has carried out a lot of activities in collaboration with partners and participated in many events during the same year. The major ones include:

- Resource Mapping for MOH
- Participated in the review meetings of HAPCO, MoH Task force, other partners' meetings and workshops
- Accreditations and licensing

- Represented in different Conferences, meetings.
- Concept note prepared for submission to D & L Packard for the new building
- Information generation and capacity building efforts on climate and health in Ethiopia

Participated in developing proposals on the following issues:

- Synthesis of researches and related documents on TB in Ethiopia
- Strengthening of TB cases detection in under nourished, prisoners and pastoralists in Ethiopia
- 24th annual conference and EPHA house launching ceremony
- Documentation of legal seminar on measures to implement the framework convention on tobacco control
- Facilitated the publication and launch of a text book on reproductive and Child Health with emphasis on Ethiopia and other developing countries
- Conducted discussions with experienced NGOs on income generating.
- Preparation of the 25th anniversary

6.1.11. Challenges

- EPHA is showing speedy growth but available resources are not enough to fully implement some of the planned activities and to meet the needs of EPHA units and chapters
- Lack of alignment of activities with the priority of SPM
- Overlap in the roles and responsibilities of departments and units of EPHA
- Shortage of vehicles
- Shortage of office space
- Procurement problems :vehicles, books and lap tops
- Breaching of AAMSP agreement
- Mentorship problem for LSI and EFETP
- Sensitivity of MSM survey and the national MARPS survey:
- Procurement of lab regents, staff turn over
- Delay in finances due to financial fund release mechanism of some donors/partners
- Lack of budget to employ secretaries and project officers for chapters
- Turnover of staff including regional representatives
- Shortage of fund for the construction of EPHA office complex
- Difficulty in collecting address of members and failure of members to inform their address change

6.1.12. EB proposal to be approved by the GA

Eight Issues have been forwarded by the EB for approval by the GA

As part of his annual EPHA performance report presentation, Dr. Assefa forwarded the following issues for discussion and subsequent approval by the General Assembly.

1. Filling the Deputy Executive Director Post which he said was indicated in the EPHA's organizational chart/organogram approved by the Advisory Council two years ago.
2. Increase AC members from 30 to 35, extend their service year to 3 years and their mix to take into account regional, gender and professional mix considerations.
3. Increase bank account signatories.
 - If the amount of money to be drawn from a bank is ETB 200,000.00 or less include Program Director to the existing bank account/check signatories
 - If the amount of money to be drawn from a bank is more than ETB 200,000 the Executive Board President or Vice-President to be included with the signatories

When Dr. Assefa concluded his presentation, the chairperson of the GA suggested that discussions on the performance report to take place after the presentation and subsequent discussion on the audit report. In this regard, he called on Ato Aweke Gebresellassie to present his company's audit report.

6.1.13. External Audit Report

Ato Aweke said that he was pleased to present to the GA the audited balance sheet of the Ethiopian Public Health Association as at 31st December, 2013 and the related income and expenditure statement prepared under historical cost convention for the year then ended. He put the collected income from different sources as 91, 441, 559.26, total expenditure as 88,153,597.36 and the fund balance as per the income and expenditure statement as 30, 310, 650.96

Speaking about the responsibility of EPHA Management and his company, he said that the preparation of the financial statements was the responsibility of the management of the EPHA and it was the responsibility of his company, based on its audit result, to express its independent opinion on the financial statements.

At the end of his presentation he said that his company was most grateful to the management and employees of the EPHA for the assistance and co-operation extended to his company during the course of the audit. He said that if there was any enquiry his company was willing to respond.

The basis of opinion and the concluding remarks of Aweke Gebre Selassie and Company was stated as follows:

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain information and explanations considered necessary in order to provide us with sufficient evidence to give reasonable assurance as to whether the financial statements are free of material misstatement whether caused by fraud or other irregularity or error.

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements. We believe that our audits provide a reasonable basis for our opinion.

OPINION

In our opinion, the financial statements referred to above together with the notes thereon, which have been prepared under the historical cost convention, present fairly, in all material respects, the financial position of Ethiopian Public Health Association as at 31st December, 2013 and the results of its operations for the year then ended.

AWEKE GEBRE SELASSIE AND COMPANY

AUTHORIZED CERTIFIED PUBLIC AUDITORS

February 14, 2014

Addis Ababa

(The financial statements of the external Auditor's report are annexed with this proceeding as annex 11)

When Ato Aweke finished his presentation, the chairperson, Dr. Teshome requested the participants first to discuss the audit report so that the auditors can leave and then proceed to the discussion on EPHA's performance report.

Discussion on the audit report

Issues:

- Have you come across any weaknesses or gaps that need to be filled or improved? Do you have confidence in your work?
- Have you done any exit interview?
- Audit has two aspects- financial audit and performance audit. Have you done performance audit?

- How is your sampling method? Is it reliable, can it help to capture existing problems/irregularities, if any?

Reflections:

- We have not discovered any irregularity or weakness that calls for rectification. We are confident about our work, we follow international standards.
- What we normally do is we submit the draft of our audit to the Finance Director of EPHA for comment and there was agreement.
- We don't do performance audit, our responsibility is to make financial audit
- When we do our work we follow international standards. We communicate in writing with donors and banks, we counter check information. On our part, we are confident, we don't have any problem. Besides, EPHA is well-staffed and has a long time experience.

Discussions on the EPHA Annual Performance Report

At the outset, the chairman of the session reminded participants to forward their views and focus on constructive issues that would help improve EPHA audits working system in the future. Then, he declared that the floor was open for discussion.

Most of the ideas forwarded from the participants were comments/suggestions than questions. Many relevant issues were raised and the major one included:

Questions and Answers:

Issue 1: I have noticed a question from a board member on the audit report. Is there anything which is not known to the Board Members? Let us be clear on this matter. We need clarification.

Reflection 1: Accountability of the Neutral Auditor is to the General Assembly. The neutral auditor may have held discussion with the Secretariat but not with us.

Issue 2: I don't think we have clearly delineated working relations between the Executive Board Members and the EPHA Secretariat. It would be good if the Advisory Council and the EB can look at it again and come up with a suggestion for next time.

Reflection 2: The secretariat and the EB have done a lot of work together. We have collectively taken administrative measures against individuals who acted against our procurement procedures. We respect our Board members and we expect them to focus on strategic matters and not on routine administrative issues.

Our funders such as CDC and Packard have their own internal auditors, they audit us regularly. We also audit our activities internally and by a neutral independent auditor. In addition, the Office of the Inspection General (OIG) audits sample organizations such as MOH, FHAPCO every three years. OIG audits even US organizations like the USAID. We were rated one of the best US funded organizations in terms of successful management of donated money.

- Reflection 3: It is system that makes an organization successful. The EB has prepared many manuals related to the proper management of financial human and material resources. These documents are useful to improving the working system of EPHA if we put them into practice fully.

At one time a problem happened in connection with a deal made with only one supplier and efforts were made to rectify this problem. The EB has the responsibility to control the procedures.

Comments and Suggestions:

- What we have heard is very gratifying. We have seen that a lot of works have been done over the past year. In this regard, the contribution of the board was also praiseworthy. If there were minor mistakes, they were corrected on time from what we have heard and we don't need to dwell on them at length now. We need to look at the bigger picture.
- It would have been good if best practices were added to the activity report.

- I understand that audit has two aspects- financial audit and performance audit. If this was not practiced before it should be practiced next time.
- Numerous research and study papers were presented and discussed during the last three days. Based on what were raised and discussed during our conference, it would be appropriate to think of preparing resolutions useful to the progress of researches, curriculum development and formulation of policies related to such issues.
- We always express our thanks to EB members, but we pay them remuneration for their contribution. The Board members and the Chairman, Deputy Chairman and the Secretary should be given incentives.

At the end of the discussions it was agreed that the AC meet and discuss the following issues and come up with a proposal.

- Define the boundary of responsibility of the EB and EPHA Secretariat.
- Study the remunerations to be paid to the Board members as well as the Chairman, the Deputy Chairman and Secretary of the Board.
- Prepare draft resolutions on the presentations, discussions held and issues raised during the three-day conference.

Discussions on the proposals of the ED

Regarding the employment of the Deputy Executive Director, the Board Members said that the post was approved by the AC two years ago but it was not implemented to date because its need was not felt. Now that the work complexity of EPHA is growing with each passing day, it is important to fill the post of Deputy Director which has already been shown in the EPHA structure prepared two years ago. Activities such as construction of EPHA house, writing grant proposals and fund raising are adding burden to the Executive Director.

The participants questioned whether this proposal was based on serious study. The existing problems can be solved once all guidelines are implemented. They suggested that institutional mapping to be worked out. After detailed discussions, the GA decided that the issue be further reconsidered by AC and the EB.

Concerning the number of AC, lengthy discussion was held on the role of the AC. Some participants felt that the role of the AC was not to advise the Board but to advocate Ethiopian health situation through EPHA. The secretary of the EB said quoting the rules and regulations of the Association that the task of the AC was to generate health policy issues and serve as a bridge between the EB and the GA. Others felt that the AC has not acted in keeping with the responsibility assigned to it. It was suggested that the members of the EB if not all at least the EB Chairperson, his Deputy and the Secretary of the Board to be represented at the AC. It was also stressed the need to consider gender mix and representation of regional chapters.

Finally, it was agreed the statute of the Association to be revisited by the legal adviser and submitted to the AC for decision.

The final EB proposal related to bank account signatories was unanimously approved. Accordingly, if the amount is ETB 200,000.00 or less the signatories will be the Executive Director, the Finance Director and the Program Director. If the amount is more than 200,000.00 ETB, the signatories will be the Executive Director, the EB board President or the EB Deputy President and the Finance Director.

6.1.14. Election of New Board Members

Dr. Teshome, the chairperson of the Plenary Session, said it was now time to elect three members of the Association to replace three Executive Board members who have completed their tour of duty. As reminder he said it was important to consider gender, regional, and professional and age mix during the nomination and subsequent voting.

A three-member electoral committee comprising Ato Hailu Meche, Ato Befekadu Girma and Dr. Dehab Belay was set up to preside over the election process. The Committee came up with draft criteria and after a debate by the plenary; the following was approved as election criteria.

- Three years of active membership,
- Minimum a holder of BSC
- Consider gender mix and representation of regional Chapters
- Two members related by blood or marriage cannot be nominated at a time

Then participants were asked to nominate seven individuals out of which only three will be elected to serve as members of the EB. Participants were requested to provide adequate information to the audience about the person they nominate.

The nominees included:

1. Dr. Fikreab Kebede
2. Dr. Takele Geresu
3. Sister Fikirte Belete
4. Prof. Afework Kassu
5. Dr. Gebre Selassie Ogbazgi
6. Dr. Agonafir Tekalign
7. Dr. Lemesa Wakjira

Out of the seven, Prof. Afework Kassu, Sister Fikirte Belete, and Dr. Takele Geresu were elected to serve as a member of the EB for the next two years.

The election process was screened live on the wall and each participant could see for himself as each vote was read by the election committee and tallied against the respective contestant. It was open and tantalizing especially the competition between Dr. Fikreab and Dr. Takele was neck-to-neck to the end. Finally, Dr. Takele managed to take the third place by only one vote difference with Dr. Fikreab. The Chairman of the GA said Dr. Fikreab will be kept in the waiting list. The newly elected EB members would commence their work within a month.

The departing EB members, Dr. Tewabech Bishaw, Dr. Assefa Seme and Sister Workinesh were given a warm and standing ovation by the entire participants of the Conference.

The Chairperson of the GA session closed the meeting by saying during the next conference, which is expected to take place in Bahir Dar, Amhara National Regional State, the business meeting will take place in the first day of the conference in order to secure full attendance participation and get ample time for discussion.

Following the closure of the Conference, participants were requested to go to the reception hosted by EPHA in their honor. At the reception two books entitled: *Evolution of Human Resources for Health in Ethiopia* (1941 – 2010) and *History of EPHA* (1989-2014) were launched by Professor Damen Hailemariam. At the reception Dr. Tewabech Bishaw, President of EPHA, invited: the three traditional award winners to express their feelings and the best oral and poster presenters to formally receive their certificates. The three best oral presenters were: 1. Bizatu Mengiste, 2. Mesfin Geremew, and 3. Dr. Yared Amare. The three best poster presenters were: 1. Daniel Mekonnen, 2. Gudina Ejeta, and 3. Hunegnaw Desalegne.

The reception has provided an added opportunity to members, who came from different parts of the country to take part in the annual conference and to celebrate the Silver Jubilee Anniversary of their professional Association, to discuss past, present and future trends of their Association.

VII. Annexes

1. Welcoming Address by Dr. Tewabech Bishaw, President of the Ethiopian Public Health Association and Secretary General of the African Federation of Public Health Associations (AFPHA)

- His Excellency Dr. Keseteberhan Admassu, Minister, FMOH, and Chief Patron for the EPHA House construction
- Honorable Members of the House of Peoples Representatives
- Dr. Mustaa Kaloko, Commissioner for Social Affairs Department of African Union Commission
- Dr. Mengistu Asnake, Vice-President/President Elect, WFPHA
- Dr. Jeffery Hanson, Country Director CDC-Ethiopia
- W/ro Yemeserach Belayneh, Country Advisor ,the David and Lucile Packard Foundation
- Professor Mengesha Admassu, President, University of Gondar
- Our Eminent Patrons of the EPHA House
- Members of the EPHA Board
- Members of the EPHA Advisory Council
- Distinguished Representatives of Local, International, Government, Non-Government and Civic Organizations
- Members of the Diplomatic Corps
- Dear Members of the Ethiopian Public Health Association
- All Friends of EPHA present

On behalf of the Ethiopian Public Health Association and on my own behalf it is my honor and privilege to welcome you all to this auspicious and memorable day when EPHA commemorates its Silver Jubilee Anniversary. This is a joyous moment to all of us that we are able to witness this special day in the life of our Association. I am also pleased that the Silver Jubilee Conference is being held in the African Union Conference Hall, in Addis Ababa, for the first time.

Your Excellencies, ladies and gentlemen,

I would like to take this opportunity to thank each and every one of you for your unreserved commitment and for finding the time to join us and be a part of the celebration of our Association 25th Birth Day, and we say happy Birth Day, EPHA, *Edeg! Temendeg!*

At this juncture, let me also thank those partners and colleagues who sent their best wishes as they are not here today. They include:

Mr. James Chauvin, President, WFPHA

Dr. Mathias Some, President, African Federation of Public Health Association

Dr. Teguest Guerma, Director General of AMREF

Dr. Georges Benjamin, Executive Director of the American Public Health Association, and

Dr. Dennis Carlson, former Dean of the Gondar Public Health College.

Your Excellencies, Ladies and Gentlemen,

At this point we find it befitting to underline Ethiopia's one important step and achievement in public health by ratifying the WHO framework Convention for Tobacco Control where the EPHA also played a key role. EPHA reaffirms its commitment to continue its advocacy and active support in the implementation of the Convention which is the important next step.

EPHA further congratulates the Ministry of Health led by His Excellency Dr. Keseteberhan Admassu in proposing for the establishment of Africa's Center for Disease Prevention and Control that was adopted by the General Assembly of the African Union. This indeed is a great achievement and we believe that the Center would make immense contribution to accelerating Africa's efforts in disease prevention and control.

Excellencies, Ladies and Gentlemen,

As per our tradition of the Annual Conference, let me now briefly highlight some of the EPHA's achievements and challenges during the year 2013. I will be brief as the detailed information is availed to you in your conference bag.

EPHA has continued to work closely with the FMOH, the RHBs, sub-regional organizations, institutions of research and high learning institutions, sister associations, national and international organizations in the public, private and NGO sectors and of course with its members to contribute its share in the nation's health development and the achievement of its objectives.

During the year, with support primarily from CDC-Ethiopia, Lucile and Packard Foundation, the Canadian Public Health Association, World Health Organization and many other partners, EPHA was actively engaged in the following key areas.

1. Partnership with CDC

- Demographic and Health Surveillance (DHSS) projects,
- Standardizing Basic Care Package and Care and Support program;
- Leadership in Strategic Information Training Program (LSITP),
- Support to youth leadership in a multi-sectoral approach in preventing multiple concurrent sexual partnership,
- Field Epidemiology and laboratory Training Program
- Support to the Ethiopian Public Health Laboratory Association,
- Support to Federal HAPCO and the Ministry of Science and Technology
- Expanding and strengthening HIV/AIDS prevention, care and treatment
- Advocacy on alcohol and substance Abuse in relation to HIV/AIDS

Also the EPHA publications are important component of the collaboration with CDC-the Ethiopian Journal of Health Development, *Felege Tena Newsletter*, *Public Health Digest*, *LSI Information Bulletin*, Master's Thesis Extract and others have been produced and disseminated.

I am glad to inform you that during the year two books-Evolution of HRH in Ethiopia and the History of the Ethiopian Public Health Association- have been published by EPHA.

2. Collaboration with David Lucille and Packard Foundation

- Has focused on strengthening the link between Households and Primary Health Care Units, for Improved Reproductive Health/Family Planning Project. However, the key challenge has remained to improve and strengthen referral linkages between different levels of the health care system. The training of HEWs on Implanon insertion and removal has contributed towards scaling up community based long acting RH/FP Services.

3. Collaboration with CPHA: EPHA's collaboration with CPHA has strengthened the Immunization component of the HEP in addition to supporting efforts towards the ratification of the WHO Convention on Tobacco Control.

4. In addition to its collaboration with HAPCO, MSH, PSI, it has contributed to health system strengthening in project implementation sites making their contribution towards achieving intended results. Other short term partnerships also included hosting regional workshops on: HIV, Drug resistance Surveillance in Africa, and on the Framework Convention on Tobacco Control.

5. **EPHA Operational and Institutional Capacity Strengthening**

5.1. **EPHA Members** now stand at 5050 an increase by 401 from last year. The number of regional chapters has increased from 18-24. I am happy to inform you that the EPHA has for the first time created a platform to discuss issues of common interest with representatives of regional chapters. Yesterday a one day preconference meeting was held with all regional chapters where a draft guideline was discussed to be finalized and implemented soon. Also, among other things, the Chapter representatives commented on a member management information system that was developed in house. It is a user friendly database and I am hopeful that the database will enable us to disaggregate information in different combinations and be a helping tool to meet EPHA's objectives. One key area is to be able to organize its membership in professional clusters to serve as knowledge based task. I hope all of you have provided us with complete information on your professional area of specialty for the database development.

5.2. **Secretariat:** Staff deployed in the Secretariat has increased from about sixty to about eighty. With increase in volume and complexity of work, strengthening the managerial and operational capacity of the Association will increase in quality of output and efficiency. Effective implementation of the new organogram and also strengthening the guidance and leadership will improve performance.

5.3. **EPHA Executive Board and Advisory Council** meetings have been held during the year to provide guidance and oversight to the Secretariat. During the year, the EPHA Board has been engaged in:

- (a) Planning and implementation of the 24th and the 25th Silver Jubilee Anniversary Conference;
- (b) Streamlining the salary and benefits of the staff of the secretariat;
- (c) Mid-term review of the 3rd Strategic Planning Document (desk review) and preparation for end term evaluation and development of the 4th strategic planning document.
- (d) Instituting administrative systems to improve the Association's credibility and accountability in the various administrative procurement procedures. Some loose ends that led to administrative irregularity were tackled with on time.
- (e) Leadership and participation in the EPHA House resource mobilization including organization of the launching of the House which will also serve as a national resource center for excellence in public health.
- (f) Program Audit: will be carried out with support from the Ethiopian Society of Obstetrics and gynecology
- (g) Revamping the Ethiopian Journal of health Development is underway in consultation with the School of Public Health.

6. **Acquisition of EPHA's Own Premise-** Resource mobilization for the EPHA House has progressed. A secretariat has been established with a full time staff and the Minister of Health H.E. Dr. Keseteberhan Admassu is the Chief Patron, supported by Eminent Patrons including w/ro Mulu Solomon, Ato Eyesuswork Zafu, Ato kibur Genna, Brigadier General Kinfe, and Ato Gashe Abera Molla (Sileshi Demissie).

I am glad to inform you that EPHA has already secured a pledge for six million birr from the FMOH in addition to 56 tons of iron bar that will be used for the construction of the EPHA House. EPHA is grateful to Dr. Keseteberhan Admassu and through him to the FMOH for their continued support in making the EPHA dream come true.

Each Executive Board Member of the EPHA is contributing 20,000 birr and the staff of EPHA have committed their one month salary.

On behalf of the Resource Mobilizing Committee, composed of Dr. Mengistu Asnake, Ato Worku Abrha, Ato Getachew Eyob, Dr. Fikreab Kebede, Dr. Grum Hailu, Dr. Teshome Gebre Dr. Gebresellasie Okubaegzhi, Sister Merkeb Bishaw, Sister Bogalech Zegeye and Ato Ali Beyene I am pleased to share with you a new venture that EPHA is proposing to enter into using the Program Related Investment package of David and Lucile Packard Foundation. If successful, the project will enable EPHA to get a substantial amount in the range of 3-5 million dollars as a minimal interest loan that could be paid over a period of some five years. I therefore urge each and every one of you to commit yourself and pledge your support to give EPHA the permanent base it needs. The design work has now received full approval and bidding and construction will begin soon.

7. Strengthening National, Regional and Global Networking and Partnership has continued in the country and abroad.

- Close working relationships and networking has been maintained with FMOH, RHBs, CDC, Universities, David and Lucile Packard Foundation, Path-Ethiopia, USAID, WHO and UNICEF and has strengthened its ties with professional associations including EMA, ENA, ENMA, ESOG, EPA, EPHLA and the newly formed Health Officers Association, EVA, etc.
- Collaboration has continued and strengthened with APHA, CPHA and the WFPHA
- The AFPHA has now secured its seat within the EPHA premise, a short term program officer has been deployed and active resource mobilization effort is underway to secure funds to strengthen its operation capacity.
- The EPHA is an active member of the WHO AFRO Regional Advisory Committee on HRH and on HSR committees
- EPHA also actively participates and contributes in different national committees such as HERQA, Ethiopian Academy of Sciences etc.

8. Immediate Tasks

Implementation of strategies to enable the Association to generate its own funds is an urgent task. In this regard, EPHA in venturing in the areas of research, training, printing, rental of office space and conference facilities are in the plan. In this regard, active participation and contribution of members is imperative.

As my term of office comes to an end, allow me to share with you my personal accounts and reflections. It gives me utmost gratification and joy to be a part of this important land mark event where the Ethiopian Public Health Association is commemorating its Silver Jubilee Anniversary.

For some of us, who were present when the Association was born, looking back through the years is like a dream come true, like witnessing your child grow, mature, and successfully lead an independent life. When EPHA launched its operation twenty five years ago, in 1989, it had very limited human resources and office facilities. Today, EPHA has transformed itself into one of the strongest and leading professional associations in the country withstanding the many challenges it encountered over the last 25 years of its journey. The Association boasts of over 5000 ever-registered members and some 3250 active members. Likewise, over 80 staff members are deployed within the secretariat and the EPHA regional chapters have reached 24. The EPHA has launched a new and interactive membership system using software uploaded on its website. It is my since hope that this website will witness dynamic interaction between and among members and also between members and the secretariat.

Now, we must all take pride in the steps taken to build our Association and expand its role. The collaborative partnership it has established with institutions of higher learning, other sectoral ministries, bilateral and international organizations, NGOs, the private sector, research institutions and the media in the country and with a number of institutions and organizations outside the country has placed EPHA in

prominent position to do more and benefit from synergy while also share lessons learned with others thereby increasing its credibility.

The 13th World Congress on Public Health that culminated in the “Addis Ababa Declaration of Health Equity” created an excellent opportunity to EPHA to demonstrate its scientific, organizational, networking and leadership capabilities to the world. Through this Congress, Ethiopia has made its contribution to national, regional and global public health and made its mark as an important player and partner in health. The success of this Congress as we have witnessed was EPHA's ability to mobilize and engage all its members, sister associations, academicians, researchers, service providers, development partners, political leaders, administrators, sectoral ministries, NGOs, the private sector, and the community at large. All these players acted as one and moved ahead which resulted in a resounding success for EPHA that took our external partners by surprise.

With the 33 Founding African National Public Health Associations and Networks, the EPHA played a key role in the creation of the Federation of Public Health Association (AFPHA). This is an important platform for African public health and related professionals to voice their views towards equitable health for all Africans. I was also elected to serve as the Secretary General of the Federation. I am proud to share with you that at the foundation meeting, our Association's delegation made a defining contribution by lobbying to have the seat of the Federation in Addis Ababa, Ethiopia. The Federation now is located within the EPHA premises with the initial operational cost being covered by EPHA until the AFPHA mobilizes its resources and manage its business on its own. Globally, the EPHA, in addition to its being a member of the World Federation of Public Health Association (WFPHA) since 1993, also representing Africa, it is an active player in the Executive Committee and the Governing Council. And our own Dr. Mengistu Asnake, the immediate past President of EPHA, was elected Vice President in April 2012, and will become the President of the WFPHA in May 2014.

While acknowledging the valuable contributions of all our members to where EPHA is now, I feel honored to thank those visionary founding members (some of them regrettably not with us today) who saw the wisdom in creating such an important Association. Along the years, our Association with support from its development partners in the country and abroad, to whom I am very thankful, has made significant contributions in the sector. I would like to respectfully invite the new generation, our young public health professions in the country and abroad, to step-in with stride, vigor and commitment and build on what has been done and take EPHA to the next level for greater contribution and visibility.

We must all renew our commitment to work diligently towards its mission and vision so that EPHA will remain relevant through the years and take bold steps to address the many challenges among others, increasing public awareness to protect their health from communicable and non-communicable diseases, strengthen EPHA's capacity in training and research to strengthen the capability of its members and for evidence based advocacy for policy and strategy and improvement in access to quality health services for all.

As public health increases in complexity there are more to be done. We need to make our EPHA gender sensitive and I urge our female public health professionals to become members and forthcoming to assume leadership role in the association. Make EPHA financially independent and ensure sustainability. Improvement in professional competence; emphasis on leadership in evidence based public health advocacy to influence policy is an area we need to excel. Vigorous involvement in professional standards and accreditation; stronger coordination and working partnership with sister professional Associations; public engagement and dialogue on national issues of public health concern; and critical thinking in strategic planning document development, implementation and evaluation; aspiring for excellence on

performance standards and strict application of the organizational structure and guiding administrative manuals; creating enabling and supportive working environment to increase efficiency; increasing member friendliness of the Association are some of the areas requiring urgent attention.

On another note, I would like to draw your attention to the EPHA House that will serve as our head-quarter, but more so as “our national resource center for knowledge and excellence in public health”, including contributing to public health in the Region. The EPHA House will contribute towards strengthening our role in research, and training and in our involvement in health sector advocacy, policy, strategy and practice.

I take this opportunity to call on every member of the EPHA to contribute to the construction of our EPHA House which I consider is our investment to contribute to bringing better services to the Ethiopian people. I believe every member and all communities will play a role in the realization of the construction of our Association's home.

Finally, I would like to say that I have been blessed, lucky and honored to be a part of the EPHA's 25 years of journey and make my modest contribution. I feel joy to be among those who founded the Association, and to have and to use the opportunities to serve EPHA in various capacities including:- as life member, as Editorial Board member of the Ethiopian Journal of Health Development, as a member of the Advisory Council, Chairperson of the EPHA House Resource Mobilization Committee and Chairperson of the EPHA Executive Board. Furthermore, I have been honored to represent EPHA and serve as the Secretary General of the African Federation of Public Health Association, and member of the Executive Committee and Governing Council of the World Federation of Public Health Associations. Most of all I am humbled and it gives me utmost gratification to be elected twice to serve our Association as its president, first in 1991-1992 and secondly from 2009-2013. I consider myself most privileged. I am grateful to all members of the EPHA for having confidence in me; to members of the Executive Board for sharing my views; and many colleagues with whom I worked closely for the guidance and support provided; and to the Secretariat for creating the environment to contribute my share. I would like to thank my family for their understanding and support that made it possible for me to give as much attention to the EPHA work.

Excellencies, Ladies and Gentlemen,

At this stage, on my own behalf and on behalf of the Executive Board, the Executive Secretariat and the Advisory Council, I extend my heartfelt sincere appreciation for the continued and generous support and collaboration EPHA has been provided with to achieve its objectives.

1. The Federal Ministry of Health
2. CDC and the US Government
3. AIDS Resource Center-JHU
4. WHO
5. UNICEF
6. The David and Lucile Packard Foundation
7. Canadian Public Health Association
8. American Public Health Association
9. WFPHA
10. EPHA Regional Chapters and
11. The Public and Private Media, and
12. All others that I did not mention by name here

Ladies and Gentlemen,

It is with this spirit of joy and collaboration that I urge all of us to contribute working together for greater results, for better future, towards equitable global public health and for the attainment of the highest level of health for all Ethiopian people.

Let me end my welcoming remarks with a quotation from Franz Fanon, I quote, “ Each generation must, out of relative obscurity, discover its mission-fulfill it or betray it.” I will confidently say that I and the current EPHA Board have **DISCOVERED ITS MISSION AND FULFILLED IT!** With collaboration from each one of you!

With these words I welcome you all to this historic Silver Jubilee Anniversary of EPHA

I thank you.

2. Keynote address by Mr. James Chauvin, WFPHA President (2012-2014)

- Your Excellency Dr. Keseteberhan Admassu,
- Distinguished guests,
- Dear friends and colleagues of the Ethiopian Public Health Association,

One of the prime functions of public health associations is to help achieve equitable access for all people to the conditions that create and sustain health for all by advocating for healthy public policy and effective and appropriate public health practice. National public health associations and the World Federation of Public Health Associations (WFPHA) have a critical role to play-as advocates for healthy public policy and effective and appropriate practice both within as well as outside of the conventional system that improve, promote and protect the public's health. We, as members of the global public health community, should find ways and means to help improve the capacity of public health associations around the world to create and be a vibrant, authoritative, evidence-informed, independent and influential civil society voice for the public's health.

The Ethiopian Public Health Association (EPHA) is celebrating its Silver Jubilee, marking 25 years of uninterrupted and remarkable service to the people of Ethiopia. Since its founding in 1989, the EPHA has played a leadership role as an ardent advocate for healthy public policies and the development and application of best practices to improve, promote and protect the health of all people in Ethiopia, regardless of their ethnicity or creed, where they live, or their life circumstance. It has been a trailblazer in many areas, including gender equity, reproductive health, maternal and child health, immunization and tobacco control. The recent ratification by the Government of Ethiopia of the World Health Organization's Framework Convention on Tobacco Control is testament to the EPHA's hard work and efforts to stop the toll on life of one of the world's most terrible man-made causes of morbidity and mortality. The EPHA also led by example, being one of the first strong and sustainable African public health associations to 'graduate' from the Canadian Public Health Association's Strengthening of Public Health Associations (SOPHA) Program.

The EPHA has also played an important role in the global public health scene. It became a WFPHA member in 1993. It has been a proactive member of the Federation ever since. Its representatives have sat on the WFPHA's governing board and at the highest level of leadership at the Federation's various committees. It successfully hosted the 13th World Congress on Public Health in April 2012, the second time this unique global event took place on the African continent. In May 2014, Dr. Mengistu Asnake , the former EPHA President, will assume the Federation's Presidency for a two-year term. The EPHA has played a very important role in the establishment and continued support provided to the African Federation of Public Health Associations. We appreciate the EPHA's active engagement within the WFPHA over the years, and look forward to your public health Association's continued involvement in our global Federation.

The theme of EPHA's 2014 Conference-Public Health in Ethiopia: Past, Present and Future-is a wonderful springboard for discussions about how the EPHA and other stakeholders can, in partnership with governments at all levels in your country, develop, implement and evaluate the impact on health outcomes of public and private sector policies, programs and practices that affect human health.

On behalf of the WFPHA, I wish you a successful conference and again express the Federation's congratulations on achieving 25 years of remarkable service to your country and to the World. May the EPHA continue to make "the difference" in the lives of people in Ethiopia, in Africa and around the world for many years to come.

3. Keynote address by Professor Mengesha Admassu, President, University of Gondar

- His Excellency Dr. Keseteberhan Admasu, Minister, Ministry of Health
- Dear Dr, Tewabech Bishaw, President of the Ethiopian Public Health Association
- Dear Higher Officials
- Distinguished guests and participants
- Ladies and gentlemen,

On behalf of the University of Gondar and myself, I congratulate everyone here, members and supporters of the Ethiopian Public Health Association for the 25th Silver Jubilee anniversary.

It gives me a great pleasure to be addressing you on such momentous occasion. As you know, our own institution, the University of Gondar, was initially established as a Public Health College and Training Center 60 years ago this year.

The history and development of our Institution forms an interesting part of the history and development of Public Health in our country as a whole.

Therefore today I want to talk to you about from our perspective of the past, current experiences and practices of Public Health in Ethiopia, and the way forward.

1. PAST EXPERIENCES AND PRACTICES OF PUBLIC HEALTH IN ETHIOPIA

No modern health services were introduced to the country until the 1950s witnessing from time immemorial, the Ethiopian people depended on the use of traditional medicine. It was observed that the health status of the Ethiopian people before 1954 was very much poor with few health institutions and health personnel present only in big cities but almost none in the rural set ups.

The "Draft justification for the establishment of the Public Health College and the Training Center" (1952-1953) further elaborates the health status in Ethiopia before 1954.

"There exists only one doctor for about 160,000 head of population and no doctor for 600,000 people in the province of Gamu Gofa." The incidence of the malaria epidemic in the Dembia plain around Gondar which affected 20,000 took the attention of the Ethiopian Ministry of Public Health and global partners. Then the first health center was opened at Kolla Diba in Dembia District.

Therefore the establishment of the Public Health College and Training Center in 1954 became necessary to meet the pressing health service needs of the rural Ethiopian population in the shortest possible time and in the most economical way.

In order to meet these health care service and health manpower demands of the country, the government of USA through USAID, WHO, UNICEF and the Ethiopian Ministry of Public Health jointly established the Public Health College (PHC) and Training Center (TC) in Gondar on October 4, 1954.

The aim of PHC and TC was for the training of the well known "Gondar Health Team" that includes a team of mid-level health workers; health officers, community nurses, and sanitarians. They were trained in order

to give integrated curative and preventive health services designed to control and prevent public health problems.

The Institution adopted **the philosophy of community based and team approach training** to give basic health services especially to the rural community. This was the start of the philosophy of team approach and community based teaching of health professionals. Gondar was the first model for the training of a professional health team in the world, i.e. pioneer of such training system which can be instituted in developing countries.

2. CURRENT EXPERIENCES AND PRACTICES OF PUBLIC HEALTH IN ETHIOPIA

To achieve the national health goals, many efforts were undertaken related to human resource development. Currently many universities and colleges are opened to produce health professionals at all levels. It is a critical time to work on quality of education in order to produce competent professionals.

As the number of training institutions have been increasing, standardizing and validating of graduates has been mandatory. Accordingly, regular evaluation and revision of the curriculum, using different instructional methodology based on the principles of student centered and innovative approaches, involving continuous assessment, focusing on practical evaluation and external qualifying examination are the quality assurance methods taking place in the training institutions.

At this junction, the contribution of EPHA should be recognized for creating a national and global network in research, growth in its capacity and involving multi-professionals members, increasing global reputability and influencing national health policy and serving as a model association for others.

I believe the public health professionals shall consider emerging and reemerging health problems, in which the public demands at large such as:

- Addressing healthy behavior among young generation
- Disabilities
- Chronic diseases (cancer, hypertension, diabetics)
- Food additives and genetically modified food products
- Drug resistance strain
- Engagement to protect the health and safety of working force.

3. THE WAY FORWARD

Despite the efforts made so far, as public health professionals, I suggest to pay attention to the following points.

1. Institute structures to promote inter-sectoral collaboration, regional and global network for health professional education.
2. Promote problem based and intervention oriented health researches in the Public Health Training Institutions
3. Create modalities which would motivate the health professionals to be proactively engaged in the national health sector development.
4. Establish national or regional bodies responsible for accreditation and quality assurance of medical education.
5. Promote private investment in medical education aligned with national health needs

Dear All,

Today is a very special day for everyone here especially for me. I feel I am very fortunate to be part of this exceptional occasion of 25th Silver Jubilee Anniversary of EPHA. What makes today very special is that it is the year we officially start celebrating our 60th anniversary, our **Diamond Jubilee**. Even though we all

share similar feelings to this moment, it is a great pleasure for me to say happy 25th and 60th anniversary from the bottom of my heart to all. As you may guess, the University of Gondar has planned a year full of events of celebrations: **Alumni graduation, referral hospital inauguration and a conference on the past, present and future** of our university. In between there will be also **art entertainments**. The grand events will happen on the beginning of July 2014. We want the celebration to have a positive impact on every one of us. To make us feel we contribute. To make each of us feel we left something behind for our children, for the next generation; something long lasting, something unforgettable, something people would remember us by, something that others would love to symbolize us for. Thus, I ask everyone to take part in the different activities of the **diamond jubilee** celebration. As you may recall, the highlight of our celebration is at the beginning of July 5, 6, and 7, 2014 when we are expecting more than 3000 guests from all over the world including alumni, higher government officials, presidents of prestigious universities in the world, partner organizations and many others. Therefore, we all need to be prepared to make the celebration as colorful and as shiny as a diamond.

Before I conclude, on behalf of the University of Gondar and myself, I would like to extend my heartfelt gratitude to the 25th silver jubilee of EPHA working groups, for their commitment, dedication and passion and also who created an opportunity to bring all of us here today to jointly celebrate the Anniversary.

Together we can do better!

I thank you very much

4. Keynote address by Dr. Jeffery Hanson, Country Director CDC-Ethiopia

- Your Excellency Dr. Keseteberhan Admassu, Minister of Health
- Honorable Ministers
- Honorable Members of Parliament
- Distinguished Members of EPHA
- Distinguished representatives of Development Partners
- Distinguished panelists and guests
- Fellow public health colleagues
- Ladies and Gentlemen

It is a great pleasure and honor for me to be part of this event. On behalf of CDC and the USG, I congratulate the Ethiopian Public Health Association (EPHA) and its members for the Silver Jubilee Anniversary of the Association.

The Ethiopian Public Health Association has been a valued CDC partner since 2003, implementing PEPFAR supported HIV/AIDS programs.

The goal of this partnership is to improve the effectiveness of comprehensive HIV/AIDS programs through the generation and dissemination of quality strategic information (SI) in Ethiopia. EPHA has expertise in generating and disseminating strategic information for decision making and as these are core components of an effective HIV response, EPHA is contributing its utmost to improve public health practice and service delivery in the area of HIV/AIDS prevention and control in Ethiopia. I would like to highlight some of EPHA's important contributions to PEPFAR supported programs.

- EPHA has strengthened six health demographic surveillance sites (HDSS) and one mortality surveillance program run by local universities to produce longitudinal data on vital events and causes of death.
- It is also working closely with key stakeholders like AAU and EPHI in the implementation of Master level Field epidemiology and Certificate level leadership for strategic information training programs to build the capacity of professionals in the field of epidemiology to be capable of managing PH emergency situations including epidemic investigation, response and surveillance systems.

- EPHA is also working on bio-behavior, mapping and six estimation surveys on key high risk populations to address each target group with appropriate HIV prevention, mitigation and control programs.
- EPHA is also involved in in-service training programs like research methodology and ethics training which have been given to health professionals in partnership with local universities.
- EPHA has also produced information on alcohol and substance abuse in relation to HIV/AIDS and has initiated public health intervention based on the evidence produced.
- In addition, it has enabled the Ethiopian Society of Obstetricians and Gynecologists (ESOG) to implement and expand standard PMTCT services to private institutions.
- Moreover EPHA has also supported youth leadership in the multi-sectorial approach to reduce multiple concurrent sexual partnerships.
- EPHA has also supported the Ethiopian Public Health Laboratory Association (EPHLA) for the expansion of standard laboratory practices related to HIV/AIDS prevention, care and treatment both in the private and government sectors.

PEPFAR/CDC are proud of our partnership with EPHA and we have appreciated EPHA's technical and programmatic expertise to effectively roll out programs through partnership and networking and participatory planning, monitoring and evaluation. We look forward to strengthening our partnership with EPHA and other collaborating partners for the successful implementation of Ethiopia's health development program and in realizing our shared vision of: **Creating an AIDS-free Generation.**

Once again, congratulations for your 25th Silver Jubilee Anniversary and I wish you all not only a fruitful three days of meetings, but more many years of public health service to come.

Thank you

5. Keynote address by W/ro Yemeserach Belayneh, Country Advisor, The David and Lucile Packard Foundation

- Your Excellency D. Keseteberhan Admasu, Minister of Health
- Your Excellency Dr. Tewabech Bishaw, President of EPHA
- Dear members of EPHA,
- Distinguished guests,
- Colleagues,
- Ladies and gentlemen

Goo Morning

I would like to thank the Conference organizers for giving me the opportunity to share my ideas at this historic 25th Anniversary Celebrations and Annual Conference and of the Ethiopian Public Health Association.

Dear members and friends of EPHA- I join preceding speakers to express my heartfelt congratulations to the members, secretariat and board of EPHA. In the same manner, I want to congratulate all of us-the public- who are both the beneficiaries and benefactor of improvements in public health in Ethiopia.

Your Excellency and distinguished guests,

Twenty five years is a period of adolescence where a child grows, learns, and reaches adulthood to enjoy life and to contribute to the society. As a human development is a lifelong process of physical, behavioral, cognitive, and emotional change, so is organizational growth. During the last 25 years, EPHA has grown in its scope and reach. During this period, the issues in health and other social affairs have been going through a dynamic process of change and development in Ethiopia and around the world.

Public Health in the 21st century, where the whole world has become so interconnected and interdependent, is much different than twenty five years ago when EPHA started its toddler jump. Today, everything that affects us-from global warming to the spread of disease, from migration to alcohol and

substance abuse require a different set of skills and approach. During the last decades, the field of public health has grown from addressing mere absence of disease to incorporate a sense of wellbeing, enjoyment and fulfillment in all aspects of life.

Perhaps one of the most important paradigm shifts in public health during the 21st century is the world has come together to address critical health and social issues. Health has become an important and basic human right that transcends geographic and political boundaries. People are entitled to expect from their governments to safeguard and promote their health. As a result, public health issues are now so high on the agenda at meetings of world leadership. There is a greater coverage on health and social issues on local and international media.

Another important aspect of public health in the 21st century is health has become a joint venture between the health sector and the community at large. In many countries, including Ethiopia, public health has taken an inclusive approach where the need for integration and participation of communities has taken a spotlight; and women have a leading role at the heart. Public health now embraces the public sector alongside the private, the family together with the community, and women together with men.

Yet there are major challenges that still confront public health agenda in Ethiopia and globally. To begin with, in most of the developing countries, the health sector is severely affected by high staff turnover, disease focused approach and vertical funding mechanisms. As the world has become socially and geographically interconnected, there is a severe threat of deadly epidemics moving around the world rapidly and dangerously. Furthermore, health problems are reinforced and magnified by a wide range of factors including poverty, low levels of education, conflict, climate change, inappropriate nutrition, high birth rates and so on.

Your Excellency,

Ladies and gentlemen,

In spite of the growing challenges and demands, we are living in a very exciting period. Public health issues are wide and inclusive leaving a lot of room for innovation and technology. The global landscape for public health is in constant transition.

Nationally, Ethiopia is going through a social, economic and demographic transition. We have a great opportunity to leverage from emerging youth bulge and demographic transition provided that there is an increased investment on young people and decrease in our fertility rate. We should have appropriate policies and focused development interventions addressing the holistic needs of young people in education, livelihood development and employment opportunities. Family Planning and Reproductive Health programs should be further expanded so that young people can get appropriate services.

Globally, platforms and process to frame the post-2015 development agenda are moving fast. A Number of institutions from developed and developing countries are working hard to ensure inclusion of various public health issues.

In conclusion, in the years to come, EPHA will have greater roles and responsibilities nationally and internationally to closely follow the debate, understand the context and help us to re-align our interventions. Looking forward, on behalf of the Packard Foundation and myself, it is my sincere wish EPHA will become one of the leading global institutions of the new era to deliver change, add impetus to what is already happening and realize the full potential of the Association.

Thank you very much for your attention.

6. Official opening address, H.E. Dr. Keseteberhan Admassu, Minister, Federal Ministry of Health

- Honorable Ministers
- Honorable guests from the House of Peoples Representatives

- Members of the Ethiopian Public Health Association
- Representatives of Development Partners
- Guests and Panelists

Ladies and Gentlemen

It is a pleasure for me to deliver a congratulatory message on the historic occasion of the Ethiopian Public Health Association's 25th Silver Jubilee Anniversary. Please allow me to congratulate the leadership, membership and stakeholders of EPHA on their 25th Silver Anniversary. I should say on our 25th Silver Jubilee Anniversary because I am also a member of EPHA.

Congratulations and a job well-done!

On behalf of the Government of Ethiopia and the Ministry of Health I would like to assure the leadership and members of EPHA that we will build on our existing strong partnership to improve the health and well being of our people by generating and implementing evidence-based health policies, strategies, programs and plans. Over the past years, EPHA convened well-attended annual conferences that have provided tremendous opportunities for stakeholders of the health sector to explore scientific research, best practice and programmatic experiences regarding the public health development of Ethiopia. The conferences have also provided platforms for participants to dialogue and debate on broad range of public health issues.

As a learning organization I do encourage you to continue to use the annual conferences to share best practices, new innovations and draw lessons relevant to the future. Moreover, true to the theme of this year's annual conference, entitled: "Public Health in Ethiopia: Past, Present and Future", I do implore you to critically assess your past contributions, draw lessons learned from your experiences and develop a road map for the future.

Now talking about the development of our health sector over the past decades, allow me to share with you some of the developments in the health sector in Ethiopia. As probably you have heard in September last year, a joint UN and World Bank estimate has shown that Ethiopia has achieved MDG four, three years ahead of schedule. In the same period, the Global report on AIDS has also shown that new HIV infections has declined by more than 90% and vertical transmission of HIV from mothers to children has also decreased by more than 50%. Over the past 10 years, we never had a generalized malaria epidemic and progress made in controlling tuberculosis is also very encouraging. So we would say Ethiopia is well on track to achieve MDG six as well.

One of our difficulties is reducing maternal mortality. We have made good progress but not enough to achieve MDG targets. We need to accelerate our efforts. There are a number of things and good developments that have occurred in the arena of maternal health. One such example is the success of Family Planning Program in Ethiopia. In this very room Ethiopia has hosted the International Family Planning Conference where the success of Ethiopia was also celebrated in terms of expanding access to family planning services. Today early in the morning, I have heard very good news from colleagues in the US where they are implementing an innovation survey, real time survey using mobile cell phones covering the entire nation that family planning prevalence rate, the contraceptive prevalence rate has significantly improved. It has reached around 39% and this is a huge achievement by any standard. This means over the last three years alone, we have increased our CPR by 10 percent and this is in line with the IFHP end of project survey which was done last May and the preliminary result has shown the same result with that of the Ministry of Health, i.e. around 39% CPR for modern family planning methods and this is a good progress.

Another encouraging news is the number of mothers giving birth in health facilities. As you know the last DHS has shown that only 10% of mothers have given birth in health facilities. And in these two surveys, and in our half term report, we have seen that close to 30% of mothers are giving birth in health facilities,

which is much less than our ambitious targets of achieving 62% institutional delivery by the end of 2015. But if you compare it with where we were three years ago, this is also a good improvement.

So we believe that we are also in the right track to accelerate the reduction of maternal mortality and help our country achieve the targets and above all improve the health and well being of our mothers and women throughout the country.

The Government is also expanding access to facilities as has been mentioned over the years. Our network of primary health care facilities has improved. We have now around 3250 functional health centers throughout the country and this means we have achieved our target of having one health center for 25,000 people in many parts of the country. We are constructing some health centers in pastoralist parts of the country. In this regard, 400 health centers are under construction in Somali, Afar, Gambella, Benishangul, Borana, South Omo and Guji in Oromia regional State. So when all these become functional, hopefully by the end of this budget year, we will have more 3600 health centers and this will mean that there will be one health center within a seven km radius in many parts of the country. And this would help to have an impact in terms of improving maternal health as well.

We are also constructing a huge number of hospitals and in this connection 185 hospitals will become operational by the end of this budget year. Most of the construction is completed and the medical equipment is being shipped to the country. This will also increase the number of our hospitals, which will basically make it 311 public hospitals. And as indicated by professor Mengesha, bigger hospitals are also being expanded. Gondar will have a 1000-bed hospital by the end of this budget year. We are constructing a 12-storey 400-bed maternal and child hospital within the premises of Saint Paul hospital. And all the major hospitals in Addis Ababa are being expanded. We have started the construction of one billion birr hospital in Haromaya, 500 million birr hospital in Dilla, and all our university hospitals are also expanding their facilities and we are also giving attention to expanding access to hospitals.

We have also done a lot in terms of training health professionals. During the last two years alone, we have trained and deployed 4000 midwives so the number of midwives working in public hospitals and health centers has grown now to around 6000 and we hope to increase this number to 10,000 by the end of 2015.

We have also expanded our medical schools. As you know there are 27 public medical schools throughout the country in which 11000 students are studying medicine. We have around 3800 doctors now working in this country. We hope to have around 8000 by the end of 2015. So this shows that the country is investing in improving the system, improving the human resources and in improving access to infrastructure.

One emerging public health problem which needs to be addressed is the emergence of non-communicable diseases. In major cities like Addis Ababa, the top three in patient mortality causes are injury, cardiovascular problems and cancer. As we continue to register good results in controlling communicable diseases, we are already witnessing a transition in the epidemiology of diseases in each city and the same can be said for rural areas in the years to come. In this regard, the Ministry has finalized its preparation to launch major initiatives in expanding access to preventive and primary care for controlling non-communicable diseases.

Tomorrow we will sign an agreement with five universities throughout the country to expand mental health services to 200 facilities. We are also working very hard in introducing the screening services for cervical cancer to all public hospitals over the next few months.

We are also launching an initiative to make medicines affordable for selected diseases of the NCD group. Our Ethiopian Pharmaceutical Fund and Supplies Agency (EPFSA) is working very hard to ensure commodity security of these expensive drugs and they will be made available to the public.

As indicated by Dr. Tewabech and Dr. Mengistu, our parliament has ratified the WHO Convention for Tobacco Control and the Council of Ministers has also passed relevant regulations that would enforce the implementation of the Tobacco Convention. So we hope we will continue to work together to have a

tobacco free environment in many places, in public places. Of course, this calls for strong advocacy and social mobilization.

The Federal Ministry of Health is preparing a 20-year visioning exercise and we expect to get your inputs through EPHA as our country is aspiring to become a middle income country over the next decade or so. We really want to avoid the hallmark of health system in middle income countries which is inequality and disparity. So through the 20 years visioning exercise, we will continue to focus on primary health care and to expand the capability and capacity of our primary health care infrastructure and build on the existing system we have. I encourage all of you to look at the visioning document which will also be uploaded in the Ministry of Health web site. You will also get it through EPHA and we will continue to enrich it. We are also finalizing our preparation to start the development of our next five years plan which will also go through an extensive process with academia, professional associations, research institutes and implementing partners during the next months. Therefore, I would also like to request you to actively participate in helping us come up with a very good plan that will improve and sustain the gains we have made in this country over the years.

I would like to encourage EPHA to celebrate the hard works which we don't usually do it in Ethiopia. We always look at the challenges we have to address and do not really take a moment to celebrate what we have achieved. It is not an easy achievement to have a very good and strong professional association that has been efficiently run over the past 25 years; it is really huge, huge achievement. So we really need to celebrate the fact that EPHA has matured and has become an adult now and we need to continue to learn from our past experiences looking to the future of the health sector in Ethiopia. Our Ministry is very keen to take our partnership to even higher and newer heights. We believe that this partnership needs to be stronger, more strategic and long term.

Thank you!

7. Profiles of seven EPHA award-winner Institutions

1. Federal Ministry of Health of Ethiopia (FMoH –E)

FMoH's partnership with EPHA created and enhanced the impact and effectiveness of action through combined and more efficient use of resources. The prominent affiliations are the following among others:

- FMoH is providing a paramount support to EPHA in Field Epidemiology and Leadership Strategic Information training for health professionals. (selecting candidates and secure jobs after return form training)
 - FMoH has supported EPHA in project implementation on strengthening the health extension program mainly community based family planning.
 - EPHA in collaboration with the FMoH has participated in the launch of the National Non Communicable Disease (NCD) master plan; establish a platform for knowledge sharing and documentation of best practices. This will bring together the public sector, development partners, civil society organizations, drug companies, higher learning and research institutions and the private sector to address NCD through the implementation of the integrated Master plan; the development of interventions that are appropriate to the existing health system, strengthen coordination and partnerships, resource mobilization, scale-up access to interventions, treatment and system capacity building and monitoring and evaluation, and operational research.
- ✓ H.E Dr. Keseteberhan Admassu, Minister of FMoH, is pleased to serve as Chief Patron of EPHA House. The Minister is actively providing strategic guidance of resource mobilization for EPHA House
 - ✓ FMoH pledged 6 million birr for EPHA House construction to be disbursed in 3 years.

- ✓ In kind support has been pledged, 56 thousands kg iron bar of different thickness and diameter.
- ✓ Signed by H.E the Minister, FMOH has written more than 75 request support letters for UN and donor agencies, Embassies, NGOs and the business community at large with view of mobilizing financial, technical and in-kind support for EPHA House.
- ✓ The Office of the Minister is always open and is happy to take a lead on the EPHA House agenda.

Had it not been for the FMOH initiative and moral support to assist financially and in kind the EPHA House construction, mobilizing resources from other partners could have been very difficult and almost impossible.

2. US Centers for Disease Control and Prevention (CDC)

Through the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the CDC Office supports the implementation of an effective, efficient HIV program. This support contributes directly to saving the lives of men, women and children through high quality HIV treatment services and a comprehensive combination prevention strategy. Using a data-driven approach, this strategy is tailored to the unique characteristics of the local epidemic to boost health impact and improve overall program

Among the major collaborative supports EPHA is getting, the Cooperative Agreement with the CDC is one that has significant in terms of magnitude of resources as well as impacting the transformation of the Association. The rationale for this Cooperative Agreement is to facilitate and provide support to the successful implementation of the PEPFAR initiative within Ethiopia through human and institutional capacity building for strategic information; expansion and strengthening of an effective national public health laboratory network. In addition, the CDC has provided various technical, financial and material supports to the EPHA as supplemental grant to this original Cooperative Agreement.

Through CDC support, EPHA has strengthened the institutional and leadership capacity of government institution including Ministry of Health, HIV/AIDS Prevention and Control Office, Ethiopian Health, Research and Nutrition Institute to respond to the HIV epidemic and meet MDG targeted health problems. It has strengthened six health demography surveillance sites (HDSS) and one mortality surveillance program run by local universities to produce longitudinal data.

3. Addis Ababa University (School of Public Health and Collage of Health Science)

Addis Ababa University (through its School of Public Health at College of Health Sciences) is one of the key partners of EPHA and has been implementing different public health activities with EPHA for years. Some of the core involvements of the Addis Ababa University include the following: Addis Ababa University:

1. Served as scientific organ of the Ethiopian Journal of Health Development since 1994
2. Human resource development in Field Epidemiology Training Program since 2007
3. Health and Demographic Surveillance System in Butajira since 2007
4. Addis Ababa Mortality Surveillance Program since 2006
5. Short term trainings including Leadership Strategic Information (LSI), research methodology, Monitoring and Evaluation

The university had contributed a lot for the successful implementation of EPHA's missions and programs, if had not been in good partnership with the University, SPH and CHS, those programs would not have been realized. EPHA hopes that the university will continue its scientific contribution for the country as whole and in particular EPHA programs on Research, Surveillance system, trainings, Journal publications and human resource development.

4. The Canadian Public Health Association

Among the major and pioneering collaborator with EPHA is the Canadian Public Health Association (CPHA). The CPHA, through its program called “Strengthening of Public Health Associations (SOPHA)” has made significant contribution to the EPHA in terms of capacity building in its formative years through the provision of financial as well as technical supports. At the first time David Zakus linked EPHA with CPHA at first and facilitated to get seed fund for EPHA in difficult times where there was no financial base to sustain the organization. Based on that Ms Margaret Hilson president of CPHA visit to EPHA at the end of 1993 and granted CAN\$10,000 for immediate needs. This support officially lasted for ten years (from 1994 to 2003) when the EPHA was able to get direct support for projects including holding annual conferences, technical assistance to different project initiatives and supported its members in attending different international conferences. It was through this support that EPHA could establish and manage its Secretariat with a number of administrative and technical staff that totaled more than 40 at the end of the support period (2003).

Even after the completion of the SOPHA Project, the EPHA has collaborated with CPHA's Canadian International Immunization initiative (CIII) in 2005 and implemented a project to address some of the obstacles of vaccine coverage focusing on advocacy and social mobilization issues through national immunization programs at community levels through EPHA chapters and student clubs.

More recently, the EPHA is also working with CPHA on a project that focuses on capacity strengthening within the Association for the implementation of the Framework Convention on Tobacco Control (FCTC).

5. The David and Lucile Packard Foundation

The David and Lucile Packard Foundation is a private family foundation created in 1964 by David Packard (1912-1996), co-founder of the Hewlett-Packard Company and Lucile Salter Packard (1914-1987). The Foundation provides grants to nonprofit organizations at national and international level in the following broad program areas: conservation; population; science; children, families, and communities; arts; organizations effectiveness; and philanthropy.

For more than 45 years, the David and Lucile Packard Foundation worked with partners around the world to improve the lives of children, families, and communities—and to restore and protect our planet.

The David and Lucile Packard Foundation's Population and Reproductive Health program funds innovative work that addresses population growth and promotes positive reproductive health. Its goals are to slow population growth rates in high-fertility areas, and to ensure individual reproductive health and rights in order to improve the quality of life for more people.

EPHA's partnership with the Foundation goes back to 2006. The EPHA had four projects activities with the foundation completed and has one ongoing project.

1. Repositioning RH/FP through strengthening HEP in Amhara
2. Strengthening the link between households and Primary Health Care Units (PHCU) for improving the delivery and quality of Reproductive Health (RH) and Family Planning (FP) services in Amhara region
3. Scaling up community based long-acting RH/FP service through the Health Extension Package (HEP) in SNNPRS
4. Expanding Long-Acting FP in Ethiopia , operating in Amhara, SNPR and Oromia regions

6. World Health Organization (WHO)

The mission of the WHO Ethiopia Country Office is to promote the attainment of the highest sustainable level of health by all people living in Ethiopia through collaboration with the government and other partners in health development and the provision of technical and logistic support to country programs.

EPHA has been working with WHO on various projects and public health priority issues.

EPHA is working on a national nutrition program that provides capacity building training on a national level on therapeutic feeding program.

In addition, the Association also works with WHO on an assessment to triangulate and synthesize data on the dynamics and drivers of the HIV epidemic in Ethiopia and thereby to provide strategic information to guide the multi-sectoral response in the country for contributing reduction of mortality among under-five children in order to achieve the Millennium Development Goals (MDG4) through national TOT on therapeutic feeding program at national level and support the scale up of therapeutic feeding at facility and community levels through the Health Extension Program.

WHO/AFRO was a significant financial support for the successful accomplishment of the 13th World Congress of Public Health organized by the EPHA

7. CCRDA

This is an indigenous non-profit umbrella organization which provides various supports to civil society organizations engaged in different development activities including agricultural development and food security, rural and urban development, HIV/AIDS prevention and control, environmental protection and gender mainstreaming. The idea of creating CCRDA was initially conceived in 1973 when a group of few organizations agreed to exchange information and coordinate their response to the grave humanitarian disaster of the time inflicted by drought, famine and displacement. As the intensity of the crisis deepened, a bank account was opened and the Christian Relief Fund was established to mobilize resources. It is an association of Non-Governmental Organizations (NGOs) and Civil Society Organizations (CSOs) engaged in relief, rehabilitation, and diverse developmental activities focusing on poverty alleviation. It is the first legally registered Association of NGOs/CSOs operating in Ethiopia and serves as a forum for collective vision and action. It facilitates resource mobilization and the sharing of experiences for effective and sustained impact. It builds capacity to ensure efficiency and quality are met, efforts are not duplicated and lessons can be learnt. All these are geared towards championing societal transformation through increased engagements of NGOs/CSOs. Currently, this association has 348 member organizations of which 73% (254) are Ethiopian Residents Charities, and 27% (94) are Foreign Charities. Its vision is to see vibrant Charities and Societies that contribute to the development and prosperity of Ethiopia.

It has a mission of facilitating and enhancing the contribution of members to the national development endeavors through harmonization of members' efforts, enhanced collective learning and capacity building supports in the expanded operational space.

8. Profiles of three EPHA Award winner Expatriates

1. Dr. Tadesse Wuhib

A native of Addis Ababa, Ethiopia, Dr. Wuhib, served as the first country director for the Global AIDS Program (GAP) in Ethiopia for 6 ½ years. Dr. Wuhib is recognized for his work with 29 medals, certificates, awards, plaques, etc. from CDC and Ethiopia. Dr. Wuhib began his medical studies at the Gondar College of Medical Sciences, in Gondar, Ethiopia, before completing a bachelor's degree from the College of Saint

Rose, Albany, New York. He received his doctor of medicine and master's degree in public health from the Johns Hopkins University, Baltimore, Maryland. Dr. Wuhib, after training in Pediatrics at the Children's Hospital Oakland, California, entered the Epidemic Intelligence Service of CDC, and completed a preventive medicine residency program at CDC in the Louisiana Office of Public Health before joining CDC as a staff in US domestic HIV surveillance branch.

His work at CDC has included provision of HIV/AIDS epidemiologic/surveillance support to the States; serving as the surveillance expert on injection drug users (IDUs); teaching and supervising students; carrying out epidemiologic studies including as the principal investigator of a large childhood mortality study in Kazakhstan, and building the chronic diseases epidemiology and surveillance capacity in Louisiana. His international work has included infectious and pediatrics-related surveillance systems in Tanzania (with the Integrated Disease Surveillance Initiative), as well as Armenia, Kazakhstan, Uzbekistan and Kyrgystan.

Today's **EPHA-CDC** strong collaboration and bondage was initiated when Dr. Wuhib was here in Ethiopia, as a country director for GAP.

2. Prof David Zakus

Grown up in the small city of Canada, David Zakus holds his first degree in Biochemistry. He began his international career in Honduras, Central America for a nutrition program.

David came to Ethiopia for the first time in 1991 and joined the Addis Ababa University as a visiting professor by McGill University which was based in Montreal. Indeed, he worked only for six weeks in Ethiopia as there was a change of government and instability. Despite his short service, he returned nine months later and stayed for almost three years working for AAU. During his career in Ethiopia, he served as the university Professor in the then DCH.

While he was in AAU he played active role in the formation of a Professional Public Health Practitioners that has been transformed to EPHA in later stages. He was also one of the editorial team members of the first editions of the EJHD. Struggling to get financial resources to publish every edition was among the hard tasks Dr. Zakus and his team was facing. Worth mentioning here that David Zakus was the one who linked EPHA with CPHA at first and facilitated to get seed fund for EPHA in difficult times where there was no financial base to sustain the organization.

As said by David, EPHA is an excellent organization, full of energy, focused on result and marginalized and vulnerable people. The secret why EPHA has been steadily growing is nothing but attributable to the excellent and sustained executive leadership, and active and dedicated board members.

3. Prof Ulrich Lasser

Prof. Ulrich Lasser, an immediate past president of the World Federation of Public Health, studied Medicine in Universities of Berlin, Freiburg, Hamburg and Prague (1960 - 1966). Obtained Diploma of Tropical Medicine and Hygiene from London School of Hygiene & Tropical Medicine, UK (30.10.1969). Masters of Public Health from School of Hygiene and Public Health, Johns Hopkins University, Baltimore, USA (05.06.1970). Venia legendi for Epidemiology in Internal Medicine (equivalent to PhD), University of Cologne, Chair for Internal Medicine, Germany (11.06.1980)

Professor Ulrich Lasser is recognized by EPHA at this 25th Silver Jubilee anniversary for his continued support and collaboration during the 13th World Congress on Public Health where the EPHA and the WFPHA jointly organized in partnership. This has contributed to EPHA's visibility in the Region and the world wide as an important player in health development.

9. Profiles of Past and present EPHA President

1. Elias Gebre-Egziabher

Ato Elias BSc in PH in 1968, Master of Public Health (major IEC/BCC, 1972); Post-Graduate Diploma in Project Planning and Appraisal, 1981; Post-Graduate Certificate in health sector reform - with emphasis on planning, financing, monitoring and evaluation, 1988.

He was the founder and the first president of EPHA from 1989-91 and also life member of EPHA. He served as Executive committee member of the Eastern and Southern Africa Public Health Association, as Member and Executive Board Vice Chairperson of the Ethiopian Heart Association, member of the 1968 graduates Health Officers Alumni Association, and member of the Ethiopian Red Cross Society.

He served as a lecturer and Asst. Professor at AA University (both at Gondar P.H. College and Community Health Department of the AA Medical Faculty Developed teaching manuals on health education and another one on health care planning and management; conducted several research work and published in professional journals and presented on scientific forums both at national and international levels.

Currently he is working as Senior Consultant in Health Development: Strategic planning; Health and Nutrition program/project development & management; Health related strategic communication planning, including advocacy and IEC/BCC/Social Mobilization; Community based assessments/studies/ research, monitoring and Evaluation.

2. Dr Tewabech Bishaw

Dr. Tewabech Bishaw is a Public Health Scientist with over 35 years of development work in 4 countries in Asia and Africa. Her special area of focus is on public health, human resources capacity building, equitable and people centered development with emphasis on Ethiopia and Africa. She is one of the first women public health officers in Ethiopia. Dr Tewabech is the Founder and Managing Director (since 2006) of Alliance for Brain-Gain and Innovative Development (ABIDE) - a pioneer Ethiopian indigenous non-governmental, nonprofit development organization engaged in facilitating brain-gain for national capacity building.

She is one of the founding members of EPHA. Furthermore she is a founding member and serves as the Secretary General of the African Federation of Public Health Associations (since 2011). She also serves as the Executive Committee as well as Governing Council member of the World Federation of Public Health Associations (since 2010). Moreover she currently serves as member of the International Governing Board of AMREF, African Medical Research Foundation.

Dr. Tewabech Bishaw has worked for over 20 years with the United Nations Children's Fund UNICEF in senior Programme Management Technical Leadership positions in Botswana, Namibia, India, and Ethiopia. Before joining UNICEF Dr. Tewabech has worked for about 17 years in the Health Sector in Ethiopia, with the Ministry of Health at National Regional and District levels.

Dr. Tewabech Bishaw holds a Bachelor's degree from Addis Ababa University Gondar College of Public Health. She has a Master Degree in Health Services Management, a Post Graduate Diploma in Health Education, and a Dr. of Health Sciences, degree from Loma Linda University School of Health, in Loma Linda, Ca. USA.. Dr. Tewabech Bishaw is the 2012 Woman of Excellence Nominee organized by the Association of Ethiopian Women in Business.

Dr. Tewabech is the only EPHA presidents who served the associated at different times. As the only women President of the Ethiopian Public Health Association she served from 1991 to 1992 and currently she is serving as EPHA President since 2009 to date.

3. Prof Dereje Kebede

From 1983-1984, Prof Dereje was employed as a medical officer of Massawa and Meneilk II hospitals. From 1989 – 1993 he served as an assistant professor in the DCH of AAU. He was also an instructor in

undergraduate and graduate (MPH) programs for different courses as well as thesis advisor and PhD supervisor.

From 1991 to 1997 Prof Dereje worked as a member and secretary of the National Task Force on Higher Education and Training program, he has been also acting as a member of the National Technical Advisory Committee on Surveillance and Research on HIV/AIDS, and National Coordinating Committee member of the National Demographic and Health Survey. In addition, he was member of Better Health in Africa Expert Panel of the World Bank.

Prof Dereje was deputy editor and editor-in-chief of the Ethiopian Journal of Health Development (EJHD) for eight years. From 1989 to 1995 Prof Dereje served as secretary of the research and publication committee, member of executive board and president of the Ethiopian Public Health Association from 1992 to 1996). He was also a member of other associations like the Ethiopian Medical Association, Ethiopian Teachers Association, Ethiopian Biological Society Association and the Ethiopian Economic Association.

Prof Dereje has received various certificates of merit and grant awards.

Currently he is working in UN agency in West Africa. He received his Doctor of Medicine from AAU in 1983. He studied in Harvard University School of Public Health and received a master's degree in epidemiology in 1987 and a doctor of Science degree in epidemiology in 1995. He also studied clinical economics in the Centre of Clinical Epidemiology and Biostatistics in Newcastle University, Australia, in 1996. He further studied genetic epidemiology and genetics of complex diseases at the Erasmus University, the Netherland in 1997.

4. Prof Yimane Berhane

Prof. Yemane Berhane served as a physician and medical director of Hossana Rural Hospital in South Shewa Region as well as a health manager of Limu Awraja and as a technical coordinator of South Shewa regional health department from 1988-1990. Prof Yemane was hired by the Ministry of Health as an Expert of EPI, in the Epidemiology department in 1990.

As an assistant professor, Prof Yemane served in the then DCH, AAU (1993-1997). Then he was promoted to the rank of professor of public health in 1997 and served as Head in the same department from 1998 - 2001. He also served as an elected representative of the Faculty of Medicine in the National Health and Technology Council in the Ethiopian Science and Technology Commission from 1996-1998.

Prof. Yemane has served as President of the EPHA during 1996 to 2000. Honors and awards he received include: Certificate of Appreciation for service rendered as president of the Ethiopian Public Health Association (2000), Senior Public Health Research Award (October 2002), Certificate of Appreciation for dedicated long service as member of the Research and Publications Committee of the Faculty of Medicine (2006), and INDEPTH-Network Award for outstanding leadership provided during its foundation 1998-2002 (2008).

He is currently Director and founder of Addis Continental Institute of Public Health with focus on expanding graduate level education in public health in Ethiopia through formal links with universities in Ethiopia, North America and Europe.

Yemane Berhane is a Professor of Epidemiology and Public. He got his Doctor of Medicine (1987) and Master of Public Health (1992) from Addis Ababa University and his PhD from Umea University, Sweden (2000).

5. Dr. Tesfaye Bulto

From 1968-1972, Dr Tesfaye served as Health Officer in Gidamie and Ejaji Health Center, Oromia. He also served as Integrating Health Officer in Wolega Regional Health department, Oromiya, Ethiopia. From 1979-1990 Dr Tesfaye worked as General Practitioner in Humera Hospital in Gondar Province, Medical Director of Jimma Hospital and Ras Desta Hospital. He also served as a Medical Officer as well as Epidemiologist of the National Research Institute of Health (NRIH).

From 1991-2000, he served as Director of Hospital Services Division and Acting Executive Director of ALERT (All Africa Leprosy, TB & Rehabilitation Training). Since 2000 he has been working as a Health Service Delivery Specialist to USAID, bilateral Essential Services for Health in Ethiopia Project. He has served as vice chairman of the Red Cross Association of Kefa Region, chairman of the Ethical Review Committee and HSDPI final evaluation team member and health service delivery and quality of care component sub-team leader and Regional sub-team leader for Gambella. He was president of Ethiopian Public Health Association between 2000 and 2002.

Dr Tesfaye has published 10 research papers as principal and co-investigator in national and international scientific journals. Presently, Dr Tesfaye working as Deputy Chief of Party to the USAID's Bilateral Essential Services for Health in Ethiopia, John Snow, Inc. Ethiopia since 2003. Dr Tesfaye Bulto received his BSc from the Gonder Public Health College in 1967 and his MD from Addis Ababa University in 1979. He also received his MPH from Tulane University, School of Public Health and Tropical Medicine, New Orleans, USA, in 1988.

6. Prof Damen Hailemariam

Prof Damen Hailemariam graduated in 1987 as a medical doctor from AAU. In 1990 he received MPH from the DCH at AAU. In 1997 Prof Damen received his PhD in Health Services and Policy Analysis from university of California in Berkeley.

His professional involvement started in 1987 when he joined the Ministry of Health as a general medical practitioner in Gondar. Starting from 1988 he was assigned as district health manager of the Chilalo district and 1989 he joined the Arsi regional health department as regional health manager.

Between 2001 and 2005, he served as chairman of the then DCH (currently the SPH) at AAU. Prof Damen has led and participated in several research activities and authored and co-authored over 50 publications including chapters in over 10 books. Prof Damen's research activity has made valuable contribution in the development of public health in Ethiopia. He has served as President of the Ethiopian Public Health Association between 2002 and 2006.

Currently, Prof. Damen is working as a professor of Health Service management and policy analysis at the SPH, CHS, AAU.

7. Dr. Mengstu Asnake

Dr. Mengistu Asnake is a public health specialist with 25 years of experience in reproductive health, primary health care, child survival, community health services, program management, training, operational research, and clinical service delivery. Dr. Mengistu Asnake is currently the Deputy Country Representative for Pathfinder International in Ethiopia. In addition, he is the Chief of Party for the Integrated Family Health Program (IFHP), a USAID flagship FP/MNCH program led by Pathfinder International in Ethiopia.

In a voluntary capacity, Dr Mengistu Asnake served as President of the Ethiopian Public Health Association (EPHA) from 2006 to 2009 and as an Executive Board member of the World Federation of Public Health Associations (WFPHA). During this period he played a major role in bringing the 13th world congress on public health to Africa where Ethiopia being the host for the congress. As part of his responsibility in the WFPHA Dr. Mengistu Asnake is chairing the nomination committee and has contributed a lot in the nomination process of the WFPHA leadership and executive board members. In addition, he is providing technical support in the area of RH/FP training and research to the Graduate Program of the Addis Ababa University at the School of Public Health and Institute of Population Studies as an Honorary Assistant Professor.

Prior to joining Pathfinder International, Dr Mengistu Asnake worked at various levels of the MOH and was responsible for program management, training, IEC, supervision, and coordinating activities with donors, governmental agencies, and NGOs. Dr. Mengistu Asnake received an MPH from Addis Ababa University (AAU), Faculty of Medicine in 1991, his MD from AAU, Gondar College of Medical Sciences in 1987 and several certificates from different in-country and abroad trainings. Dr. Mengistu is the vice president of the World Federation of Public Health Association (WFPHA) and will assume the presidency position in 2014.

10. List of EPHA Executive Board members awarded in recognition of their service rendered to EPHA

- | | |
|------------------------------|-----------------------------|
| 1. Ato Hailu Meche | 25. Dr. Haileyesus Getahun |
| 2. Tadele Tedla | 26. Dr. Yayehyirad Kitaw |
| 3. Ato Hailegnaw Eshete | 27. Dr. Aida Girma |
| 4. Dr. Seyoum Taticheff | 28. Dr. Teshome Gebre |
| 5. Prof. Dereje Kebede | 29. Ato Tiruneh Sinnshaw |
| 6. Ato Ali Beyene | 30. Prof. Mesganaw Fantahun |
| 7. Dr. Hana Neka Tibe | 31. Dr. Seid Mohammed |
| 8. Dr. Wondimagegnehu Alemu | 32. Dr. Yared Mekonnen |
| 9. Dr. Hailu Yeneneh | 33. Ato Kebede Faris |
| 10. Ato Assefa Chernet | 34. Dr. Mirgessa Kaba |
| 11. W/ro. Haregewoin Chernet | 35. Dr. Abeba Bekele |
| 12. Dr. Desta Alamerew | 36. Dr. Yilma Melkamu |
| 13. Dr. Mesfin Kassaye | 37. Dr. Wakgari Deressa |
| 14. Ato Gabre-Emanuel Teka | 38. Sr. Tekebash Araya |
| 15. Dr. Yetnayet Asfaw | 39. Dr. Kunuz Abdella |
| 16. Wro Beletu W/Senbet | 40. S/r Workinesh Kerata |
| 17. Dr. Fentaye Mekbebe | 41. Dr. Zewditu Kebede |
| 18. Dr. Kassahun Abate | 42. Dr. Assefa Seme |
| 19. Dr. Fisseha Eshetu | 43. W/ro Hiwot Mengistu |
| 20. Prof. Leykun Jemaneh | 44. Dr. Alemayehu Mekonnen |
| 21. Dr. Eyerusalem Kebede | 45. Ato Seifu Hagos |
| 22. Ato Muchie Kidanu | 46. Dr. Filmona Bisrat |
| 23. Dr. Berhanu Demeke | |
| 24. Dr. Fikru Tesfaye | |

11. List of Editors-in-chief and Editorial Board Members of the Ethiopian Journal of Health Development

Editors-in-chief:

1. Dr. Eyassu Habte-Gabre
2. Dr. Asfaw Desta
3. Ato Elias Gebre-Egziabher
4. Ato Gabre-Emanuel Teka
5. Dr. Fissaha Haile Meskel
6. Prof. Derege Kebede
7. Prof. Yemane Berhane
8. Prof. Damen Hailemariam

Editorial Board members:

- Dr. Fisseha Haile-Meskal
- Solomon Ayalew
- Teklemariam Ayele
- Yilma Mekuria
- Dr. Yayehyirad Kitaw
- Prof. Jemal Abdulkadir
- Prof. Morten Harboe
- Dr. Asfaw Desta
- Elias Gebre-Egziabher

- Gabre-Emanuel Teka
- Zein Ahmed
- Adanetch K/Mariam
- Prof. Dereje Kebede
- Berhanu Abegaz Molla
- Dr. Hailu Yeneneh
- Dr. Tesfaye Bulito
- David Zakus
- Ato Hailegnaw Eshete
- Mehari Woldeab
- Dr. Tigist Ketsela
- Prof. Amy Tsui
- Prof. Bernt Lindtjorn
- Prof. Stig Wall
- Dr. Shabbier Ismail
- Dr. Fikru Tesfaye
- Prof. Getnet Mitike
- Prof. Helmut Kloos
- Prof. Lukman Yusuf
- Dr. Mengistu Asnake
- Prof. Mesganaw Fantahun
- Yared Mekonnen
- Dr. Tewabech Bishaw

- Zewdie Wolde-Gebriel
- Dawit Abebe
- Dr. G/Meskel Habtemariam
- Wondimagegnehu Alemu
- Prof. Ahmed Ali
- Prof. Lulu Muhe
- Dr. Abrham Assefa
- Dr. Alemayehu Worku
- Dr. Abeba Bekele
- Prof. Eyasu Mekonnen
- Prof. Atalay Alem

አወቀ ገብረ ሥላሴ እና ኩባንያው የተፈቀደ ሰርቲፋይድ ፕላብሊሽነንግ ድርጅት
ሰርቲፋይድ ፕላብሊሽነንግ
AWEKE GEBRE SELASSIE & COMPANY, AUTHORIZED CERTIFIED PUBLIC AUDITORS
Limited Partnership

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Tel/Fax 251 011 465 54 54
251 011 465 54 00
251 011 661 48 29
251 011 618 25 30

INDEPENDENT AUDITORS REPORT

ETHIOPIAN PUBLIC HEALTH ASSOCIATION (EPHA)

We have audited the accompanying balance sheet of Ethiopian Public Health Association as at 31st December, 2013 and the related income and expenditure statement prepared under historical cost convention for the year then ended.

RESPECTIVE RESPONSIBILITIES OF MANAGEMENT AND AUDITORS

The preparation of the financial statements is the responsibility of the management of the EPHA. It is our responsibility, based on our audit, to express our independent opinion on these financial statements.

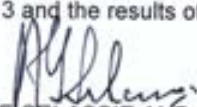
BASIS OF OPINION

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain information and explanations considered necessary in order to provide us with sufficient evidence to give reasonable assurance as to whether the financial statements are free of material misstatement whether caused by fraud or other irregularity or error.

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements. We believe that our audits provide a reasonable basis for our opinion.

OPINION

In our opinion, the financial statements referred to above together with the notes thereon, which have been prepared under the historical cost convention, present fairly, in all material respects, the financial position of Ethiopian Public Health Association as at 31st December, 2013 and the results of its operations for the year then ended.


AWEKE GEBRE SELASSIE AND COMPANY
AUTHORIZED CERTIFIED PUBLIC AUDITORS
February 14, 2014
Addis Ababa



ETHIOPIAN PUBLIC HEALTH ASSOCIATION (EPHA)
BALANCE SHEET
AS AT 31ST DECEMBER, 2013

Currency: ETHIOPIAN BIRR

	<u>Notes</u>		<u>2012</u>
FIXED ASSETS	3(4)	1,357.00	<u>899.00</u>
<u>CURRENT ASSETS</u>			
Cash and bank	5	28,371,204.40	20,687,906.39
Arada Sub City –Blocked account		1,032,500.00	1,032,500.00
Debtors	6	<u>5,320,274.80</u>	<u>9,426,940.47</u>
		<u>34,723,979.20</u>	<u>31,147,346.86</u>
<u>CURRENT LIABILITIES</u>			
Earmarked fund payable	7.1	2,464,129.10	3,834,109.39
Other payables	7.2	1,950,556.14	148,878.09
Accruals	7.3	<u>-</u>	<u>8,752.71</u>
		<u>4,414,685.24</u>	<u>3,991,740.19</u>
NET CURRENT ASSETS		<u>30,309,293.96</u>	<u>27,156,505.67</u>
		<u>30,310,650.96</u>	<u>27,156,505.67</u>

REPRESENTED BY

Fund balance as per
income and expenditure statement 30,310,650.96 27,156,505.67

Arada Gebre Selassie & Co.
Authorized Certified Public Auditors



**The Ethiopian Public Health Association
25thAnnual Conference and Silver Jubilee
22 February 2014
Africa Union Convention Centre
Addis Ababa, Ethiopia**

EPHA's Position Statement on Public Health in Ethiopia

Preamble

The Ethiopian Public Health Association (EPHA) colorfully celebrated its Silver Jubilee on the occasion of its 25th annual conference held from February 20-22, 2014 at the African Union Convention Centre. The occasion brought together over 1,000 participants drawn from members of EPHA, universities and research institutions, the private sector, development partners, as well as invited guests including senior government officials, and members of the House of People's Representatives. Dr. Keseteberhan Admassu, Minister, Federal Ministry of Health and Chief Patron of the construction of the EPHA House officially opened the event.

During the three-day event, members of the Association deliberated on the main theme of the conference; i.e., *"Public Health in Ethiopia: Past, Present and the Future"* through panel discussions, round tables, oral and poster presentations.

Building on the key themes, the Conference deliberated upon and took note of:

- a) the centrality of health to human development and that the public health profession has the promotion and preservation of health as its core function;
- b) the significant progress made by the government of Ethiopia in expanding health infrastructure and training health providers to improve access to health services and the daunting challenges in ensuring universal health access and the gaps in equity and quality of services and thereby further improve the health status of the Ethiopian people;
- c) the advances that the government of Ethiopia has registered in meeting the health MDGs, particularly the achievement of the U5MR, narrowing the gap to meet the maternal mortality ratio and the reduction in the burden of TB, HIV and Malaria;
- d) the demographic and the epidemiologic transition that the country is going through and the economic and the social milieu that people live and work in and the impact of the prevailing public policies on public health;
- e) the fact that the government of Ethiopia has developed a "Climate resilient green Economy: Green economy strategy"
- f) the significant achievements that the Ministry of Health has made in forging partnership with governments, international agencies and foundations;
- g) FDRE's expressed commitment to strengthen working relations with Health Professionals' Associations and the support that EPHA enjoys from the FMOH;

We, members of the EPHA call upon:

1. Federal Ministry of Health:

- a) to ensure equitable and sustainable allocation of resources by progressively increasing domestic revenues to the sector and with the right balance between promotional, preventive, curative and rehabilitative care;
- b) to accelerate gains made in meeting health MDGs and by drawing lessons thereof further improve the health of the Ethiopian people as measured by health indicators related to infants, children, adolescents, youth and mothers;
- c) to take further measures to build the national health system's capacity and review the prevailing health policy and work towards promoting health in all national development agenda and achieve universal and equitable health care;
- d) to strengthen existing responses and introduce new strategies to deal with emerging public health threats including non-communicable diseases;
- e) to further strengthen partnerships with health development partners including the private-for-profit sector, civil societies and professional associations through transparent, inclusive and evidence based consultative processes;

2. Partners in Health Development:

- a) to contribute financial, technical and material resources to accelerate gains in health development and exert further efforts to improve equity in health service provision, generation of evidence to inform programs and policies and build responsive and competent human resource base;
- b) to support EPHA's efforts in building institutional capacity, undertaking strategic public health researches, establishing public health data base and forums to share evidences for programming;

3. EPHA:

- a) to press ahead with its efforts to establish modalities aimed at enhancing the role of public health professionals in the development of national health sector policies and strategies by drawing on the multidisciplinary expertise of its members;
- b) to support and encourage all its members to contribute and generate evidence for policy dialogue including strategies and programs geared towards the achievement of the MDGs and the attainment of health-for-all in the 21st century;
- c) to closely work with the Federal Ministry of Health in setting evidence based public health norms and standards and promote and monitor its implementation.

22nd February 2014
25th Annual Conference and Silver Jubilee
Ethiopian Public Health Association
Africa Union Convention Centre
Addis Ababa, Ethiopia

Disclaimer:

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