“Renewing Commitment to Sanitation in the New Millennium: Aligning with International Year of Sanitation (IYS)”
Disclaimer

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“Renewing Commitment to Sanitation in the New Millennium: Aligning with International Year of Sanitation (IYS)”
ACKNOWLEDGEMENTS

THE ETHIOPIAN PUBLIC HEALTH ASSOCIATION WOULD LIKE TO ACKNOWLEDGE THE FOLLOWING ORGANIZATIONS AND INSTITUTIONS FOR SUPPORTING THE CONFERENCE AND EPHA.

USA EMBASSY

CDC/ETHIOPIA

CDC/ATLANTA

DAVID & LUCILE PACKARD FOUNDATION

FEDERAL MINISTRY OF HEALTH (FMOH)

CONFERENCE ORGANIZING COMMITTEE
Preface

The Ethiopian Public Health Association has started to publish and distribute strategic information through standing outlets of EPHA publications for decision making in public health interventions. The annual public health conference is one of those outlets that facilitated the exchange of information on policy issues and scientific findings in public health.

The 19th public health conference of EPHA is marked by historical event celebration of the International Year of Sanitation. Hence, the major theme of the conference was "Renewing Commitment to Sanitation in the New Millennium: Aligning with International Year of Sanitation (IYS)."

The sub-themes presentations addressed core topics such as "Podoconiosis: Research and Management, Health Sector Development in SNNPR, Primary Health Care of Thirty Years After Alma Ata Declaration (1978-2008) and Emerging Non-infectious Disease; The case of Cancer.

Among 95 scientific papers submitted, 37 oral and 41 poster presentations were made by health professionals during the concurrent sessions of the conference. The major public health issues covered during scientific sessions were HIV/AIDS/STIs, Environmental Health, Health Service and Child Health, FP/RH, Tuberculosis, Malaria and other communicable diseases which are presented in this abstract book.

EPHA would like to thank all of its members and others who sent scientific papers for presentation and those who participated on the presentation of the 19th EPHA public health conference themes.

Recognizing the highest need of the professionals for evidence based practice across most area of health, EPHA encourages and welcomes those who would like to be supported in the preparation and printing of books, manuals, guidelines, research extracts and other writings on health issues.

EPHA is grateful to all institutions supported and individuals worked hard to realize the 19th EPHA Annual Public Health Conference held in Hawasa.

Thanks again,
Biniyam Ayele (MD, MPH)
A/Executive Director, EPHA
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Panelist: Ato Teshome Deressa |
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Dr. Tesfaye Bulto  
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2. Social mobilization  
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4. Lost to follow |
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ORAL PRESENTATIONS
Background: Postpartum haemorrhage (PPH) is one of the leading causes of maternal mortality in Ethiopia. Vast majority of births in this country take place at home and hence the true incidence of PPH is unknown. Very few studies were conducted in Ethiopia about this subject and all of them are institution based studies. Prevention of PPH at home may significantly reduce the incidence of PPH and associated maternal death.

Objectives: The objectives of this study were to determine the incidence of PPH, describe the use of misoprostol at home to prevent PPH, determine the safety of its administration by Traditional Birth Attendants at birth.

Methods: This is a community based study. One thousand women were included in the study which started in August, 1, 2006 and carried out for a total of 14 months. The study was conducted in two woredas of Tigray region. Training was given to TBAs how and when to give misoprostol and how to identify PPH. Misoprostol 600 mg was given immediately after birth by TBA for 500 women in the intervention group and 500 women were control group and given nothing. Study was conducted after getting Permission from the Tigray Regional Health Bureau and consent from each individual woman.

Results: The study was conducted from August 1, 2006 until September 30, 2007. Five hundred women were given Misoprostol after home birth by TBA in the intervention group and there was no any intervention to prevent PPH in the rest 500 women in the control woreda. The mean age was 27.7 years in the intervention and 27.6 in the control group. The mean family size was 4.8 in the former and 4.9 in the later group. There was also no significant difference in the parity (mean parity 3.4 in women who were given the drug and 3.5 in those who were not given misoprostol). Women in the intervention group gave previous history of PPH after delivery in 16% of the cases and 10% in the control group. Perceived blood loss was more than 500ml in 13.2% of the parturients who were not given misoprostol and 8.8% in the intervention group. On the other hand, only 1% of mothers had severe PPH in the intervention group as compared to 6.4% in the
control group. Mothers were referred for PPH in 8.9% of intervention and 18.9% in the control ones (p<0.05). After referral to the higher health institution uterotonics were given in 8.7%, IV fluids in 1.2% and blood transfusion in 0.8% of the intervention group as compared to 18.9%, 6.4% and 6.2% in the control group respectively (p<0.05). There was no significant difference in the frequency of manual removal of placenta after being retained (0.8% for intervention and 1% for control group). After receiving misoprostol women developed shivering in 12.2%, sweating in 27.5% and vomiting in 6.6%. These conditions were observed in 6.7% (p<0.05), 17.5% (p<.05) and 4.8% in women who were not given the drug after delivery. There were four maternal deaths in the control group and all were reported to have severe PPH. However there was only one maternal death in the intervention group.

Conclusion: Administration of misoprostol after delivery to prevent PPH can be done safely by TBA at home. Community distribution of misoprostol by TBA can have a significant role in the reduction of maternal mortality where PPH is one of the leading causes of maternal mortality and the vast majority of births take place at home.

**ABSTRACT 10**

**EVALUATION OF ROUTINE IMMUNIZATION DATA QUALITY FROM ROUTINE RECORDING AND REPORTING IN ADDIS ABABA**

*Fekadu Nigussie (BSc, MSc), Alemayehu Amberbir (BSc, MPH), Zerihun Tadesse (MD, MPH)*

**Background:** Immunization coverage is increasing throughout the world including Ethiopia in the past two decades. Many studies found and reported that discrepancies in reporting of coverage data as well as weak supporting mechanism to ensure data quality at the district level. The validity of the data is therefore an area of concern.

**Objective:** This study was conducted to evaluate the status of Immunization data quality from routine recording and reporting in Addis Ababa.

**Methods:** The study employed case study evaluation design using both qualitative and quantitative data collection methods. Among the ten sub-cities that are found in Addis Ababa, three of them were chosen using simple random sampling method and all eleven governmental health facilities that are found in these three sub-cities were considered for the study. Microsoft Excel spread sheet was used for those analyses like...
accuracy, completeness and timeliness and SPSS version 12.0.1 was used for analysis of observation data. Finally the qualitative data was analyzed thematically by manual.

**Results:** The study showed that the DPT$_3$ vaccination report accuracy was 91% by recounting. The DPT3 data from tally sheet at the HF compared to the report sent to the sub-city by the same health facility. Among the expected 128 reports per year to be sent to the sub city in the study period: Nearly 11 (9 %) of the reports were incomplete and 27 (20%) were not sent timely. Failure to use daily tally sheet, calculation error, forgetting tallying after vaccination, losses of tally sheet, failure to mark at the end of last report each month, unavailability of completeness/timeliness monitoring chart and sometimes taking average of the previous months during quarter and annual reports, were the major problems identified by the study as causes for inaccuracy of reporting. In addition, the routine immunization data use was not at acceptable level both at health facilities and sub-city level (QI score: 33% and 48%, respectively). Absence of supportive supervision on regular basis, lack of training that focuses on data use and management were among the major findings for low data use QI score. Another important finding was that health workers viewed report submission as an activity carried out for consumption by the next higher level rather than a process that may support their own work. Furthermore, absence of regular dissemination of official projected population figure during annual planning was the major problem identified for the use of unreliable denominators.

**Conclusion and Recommendations:** Generally the study revealed that the overall weighted average of routine immunization data quality was at acceptable level (79%) as per the judgment parameter settled before the evaluation (\( \geq 70-85\% \) is acceptable). But, specifically the observation of data use and monitoring systems in separate way showed at low level per the judgment parameter settled. Therefore, supportive supervision, on-the-job training on data utilization should be conducted to ensure quality routine immunization data for decision making use. In addition, annual projected population figure for the program should be officially communicated from the responsible bodies in a daily basis. Each facility needs to be supervised on regular basis. Moreover, it is strongly recommended that data quality need to be included in the periodic evaluation of relevant health workers so that it will be done on day-to-day basis.
ABSTRACT 16

ASSESSMENT OF DIETARY INTAKES OF ESSENTIAL NUTRIENTS AND NUTRITIONAL STATUS OF PLWHA IN YEKA, LIDETA AND AKAKI SUB-CITIES OF ADDIS ABABA

Ambaye Degefa (MA), EHNRI; Yared Mekonne (PhD); Tsegaye Demissie (MSc), EHNRI

Background: Available evidences so far demonstrate the fact that micronutrient deficiencies or malnutrition appear to be common in persons living with HIV/AIDS (PLWHA). Provisions of care and support services for PLWHA with regards to food and essential nutrients did not go far enough.

Objective: The aim of the survey was to assess the dietary intake of essential micronutrients and existing nutrients status of PLWHA in the three sub-cities and to generate baseline information that can be used to track the progress and impact of the interventions.

Methods: This study was carried out between July 15 - September 30, 2006. One hundred purposively selected PLWHA were included in the survey. Relevant socio-economic, health and nutritional knowledge information was gathered through a structured individual questionnaire. Twenty-four hour recall method was used to solicit dietary intake information and height and weight measurements were taken to assess the nutritional status.

Findings: Energy and heat giving function of food was known by 86%, growth, repair and maintenance function by 55% and protection from infection by 82%. Majority could not mention the main nutrients. Relatively more respondents mentioned vitamins (54%) followed by proteins (49%) and carbohydrates. Only 13% mentioned minerals. Knowledge regarding the functions of the nutrients and the sources of these essential nutrients was found poor.

At least three reasons why balanced and increased intake is important for PLWHA was known by 43.6%. Vegetables and fruits consumption in the week preceding the survey was found very poor. Nearly 41% and 55% of PLWHA has consumed anyone of the vegetables and any fruit, respectively, less than seven times in the week preceding the survey. Only 7.7% obtained kale from own production, while nearly all vegetables were purchased.
Average calorie intake is 1812.3 (kcal), protein 27.2(gm), iron 28.2(mg), vitamin A 151.4 (µg) and Vitamin C 24.4 (mg). Nearly 78% consumed below the recommended calorie intake, 96% below the recommended protein intake, 96.2% below the recommended vitamin A intake and 54% below the recommended vitamin C intake. In the overall, 27.3% were malnourished and among them 5.1% are severely malnourished, 7.1% mildly malnourished and 15.1% moderately malnourished. Those PLWHA who had prolonged diarrhea, nausea/vomiting, constipation, who claimed body weight loss and those who had poor or no appetite all, had low nutritional status. Those who had low CD4 cells count are more malnourished compared with the high CD4 cells count.

Among the socio-economic factors, knowledge about the importance of increased and balanced diet, education and income were positively associated with the dietary intake. It was also found that vegetable and fruit consumption practice over the week was positively associated with dietary intake. Literate PLWHA and those who have higher income have better nutritional status.

**Conclusion:** The study clearly demonstrated that knowledge pertaining to various aspects of nutrition is unsatisfactory and also that nutritional status of the PLWHA is found poor. The study suggests the need of promoting strengthened awareness and behavior change communication activities regarding importance of balanced and increased consumption of the essential nutrients for PLWHA.
ABSTRACT 18

CONSTRUCTED WETLAND SYSTEM FOR DOMESTIC WASTEWATER TREATMENT: A CASE STUDY IN ADDIS ABABA, ETHIOPIA

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During the last decades, constructed wetlands were very successful when used for treatment of wastewater from different sources such as municipal, domestic, industrial, agricultural and surface runoff. This new approach is designed based on natural processes involving complex and concerted interactions between the plants, the substrate and the inherent microbial community.

To evaluate the performance efficiency of Constructed Wetland and generate information, a total of 24 inlet and outlet grab samples were collected from eight sites and analyzed for selected wastewater quality parameters from Jehovah Witnesses Branch Office wetland constructed to treat domestic wastewater. To make the study representative, three samples were collected within fifteen days interval on each sample site and inlet samples were collected two days before the outlet ones, according to the estimated Hydraulic Retention Time (HRT) of the wetland. Jehovah Witnesses Branch Office wetland is found in Addis Ababa city administration, Yeka sub-city Kebele 03/04. The parameters analyzed were Biochemical Oxygen Demand, Chemical Oxygen Demand, Total Suspended Solids, Ammonium N, Nitrate N, Total N, Orthophosphate, Total Phosphorus, Sulfate, Sulfide, Temperature, pH, Total Coliform and Fecal Coliform. All of them were measured using standard methods.

The treatment performance of Jehovah Witnesses Branch Office wetland was evaluated based on the percentage removal efficiency of the above parameters. Within the study period, the average removal efficiency of the wetland system was 99.3% (Biochemical Oxygen Demand), 89% (Chemical Oxygen Demand), 85% (Total Suspended Solids), 28.1% (Ammonium N), 64% (Nitrate N), 61.5% (Total N), 28% (Orthophosphate), 22.7% (Total Phosphate), 77.3% (Sulfate), 99% (Sulfide), 94.5% (Total Coliform) and 93.1% (Fecal Coliform). Except Ammonium N, Total Coliforms...
and Fecal Coliforms, all the other parameter values of the effluent were below World Health Organization’s standard values.

Moreover, though the difference is not as such high, the result of this study indicated that wetland cells planted with *Cyprus papyrus* (cell 1 and 3) showed higher removal efficiency for Nitrate-N (82.4%), Ammonium-N (24.8%), Total N (54.8%), Orthophosphate (23.5%), and Total Suspended Solids (83.9%) than the other wetland cells. Similarly wetland cells planted with *Phoenix canariensis* (cell 4 and 6) showed higher removal efficiency for Total Phosphorus (17%), S\(^2\)- (99%), Biochemical Oxygen Demand (98%), Chemical Oxygen Demand (90%), Total Coliform (94%) and Fecal Coliform (91%).

While the other wetland cells planted with *Cyprus alternifolia* (cell 2 and 5) showed higher removal efficiency only for sulfate (82.2%) than the others. However, these differences were statistically significant (p<0.05) only for Sulfate and Fecal Coliforms.

The performance efficiency results indicated that, this wetland system has excellent removal capability for biochemical oxygen demand, chemical oxygen demand, total suspended solids, sulfate, sulfide, total and fecal Coliform bacteria. However, since the Hydraulic Retention Time of the studied wetland was very short (2.16 days) the removal efficiency was low for nitrogen (especially ammonium N) and phosphorus. The result of this study helps to promote for more widespread use of this technology which was both energy and cost effective alternative wastewater treatment system in the country with the added benefits of providing wildlife habitat and recreational value in the country.

In general, based on the overall results of the treatment performance of Jehovah Witnesses Branch Office wetland, the application of constructed wetland in Ethiopia can be considered as a technically as well as economically viable option for domestic wastewater treatment.
How can you plan solid waste disposal when you don’t know how much waste your city generates? How can you design solid waste management options when you don’t know rate of solid waste generation and when you don’t distinguish more influential socio-economic and demographic descriptors of rate of solid waste generation?

Unfortunately, few communities have the resources, much less the finances, to study rate of solid waste generation and its main descriptors. As the result, solid waste officials either use outdated rates, which were computed from data surveyed many years back that does not consider current socio-economic and demographic features of a city or commonly use national averages that does not actually represent rate of a particular city.

Current variations of solid waste characteristics, however, should be studied at community level within subsequent few years interval. Otherwise relying on pervious averages and national figures will result a misguided policy and a failure to act implicit policy interventions ad hock to solid waste management of a city.

Thus, in one of the sub-cities of Addis Ababa, in the sub-city of Addis Ketema, based on systematic random sampling procedure 422 households were selected and 402 households were actually surveyed. They responded to a designed questionnaire, which asks about their socio-economic and demographic background. And, at two points in time the daily solid wastes generated from each selected household, for consecutive ten days, were collected and carefully weighed.

Obtained data were analyzed using both descriptive and inferential statistical tests. The final outcome of the research were; One, rate of solid waste generation of the sub-city
from all sources and rate of residential solid waste generation were 0.645kg/c/d and 0.505 kg/c/d, respectively. Two, higher income group of households showed a higher rate of residential solid waste generation than low income group. Three, single household residents showed higher rate of residential solid waste generation than two or more household size residents. Four, level of education of heads of households showed neither positive nor negative relation with rate of solid waste generation.

**ABSTRACT 24**

**IMPACT OF HOUSEHOLD FOOD AND NUTRITION SECURITY ON ADHERENCE TO ANTI-RETROVIRAL-TREATMENT AND TREATMENT OUTCOMES AMONG PEOPLE LIVING WITH HIV/AIDS, DIRE DAWA**

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**Background:** Adherence to Anti-Retroviral Therapy (ART) is critical for optimal virologic suppression and improved CD4+ cell count. So far a range of predictors of adherence to ART in many different social and cultural settings have been identified. However, household food and nutrition security as predictor of adherence and ART outcomes is less understood.

**Objective:** To assess the effect of household food and nutrition security on adherence to ART and treatment outcomes.

**Methods:** A cross-sectional study with both quantitative and qualitative methods was conducted in Dire Dawa Administrative Region from January to August 2007. Adult PLWHA on ART for at least 3 months were study participants. Food security assessment core module, meal frequency, dietary diversity, food aid and BMI were used as indicators of household food and nutrition security of PLWHA and self-reported adherence was used to measure adherence to ART. Change in CD4+, body weight, functional status and frequency of opportunistic infections (OIs) were used to measure treatment outcomes.

**Results:** Almost 90% of PLWHA on ART were food insecure and 30.1% had at least mild malnutrition. On self reported adherence 96.6% of them were adherent to 95% of
the ART drugs prescribed. The median change in CD4 count after 6 months and weight after 3 months of ART were 116 (IQR 82-182) and 3kg (IQR 1-6kg), respectively. Reported diarrhea and lung disease were 17.9% and 54.1%, respectively. Food aid was found to be significantly associated with improved functional status (OR 1.89, 95% CI 1.20-2.97). Dietary diversity and meal frequency were positively correlated with change in weight and CD4+, respectively (p<0.05). Pre-ART nutritional status was negatively correlated with change in weight (p<0.001).

Food and nutrition insecurity is a serious problem of PLWHA on ART. Overcoming all the odds to adhere PLWHA in this study were adherent to ART than other documented adherence rates. Food aid, dietary diversity and meal frequency were associated with functional improvement, weight gain and CD4 increase. Poor pre-ART nutritional status was correlated with high velocity of weight gain. Current malnutrition was associated with reported lung and diarrheal diseases.

**Conclusion and recommendations:** There is high level of adherence to ART among PLWHA on ART. The mere success in achieving high level of adherence among PLWHA however, should not undermine the impact of food and nutrition security on the treatment outcomes which is the ultimate goal of the program. Food aid as relief together with a sustainable income generating activities need to be included in ART program activities.

**ABSTRACT 26**

**CURRENT STATUS of Schistosomiasis mansoni in JIGA and BAHIR DAR AREA, NORTHWESTERN ETHIOPIA**

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**Background:** Two forms of schistosomiasis: _S. mansoni_ and _S. haematobium_ are endemic in Ethiopia. Some pilot schistosomiasis control trails were done many years
ago in some endemic areas of Ethiopia indicated decline in prevalence and intensity of the disease. However, collection of recent information on the burden of the disease is important in order to evaluate the effectiveness of intervention measures taken in the past and to formulate appropriate measures for the future. The work on schistosomiasis in Jiga and Bahir Dar towns was published more than a decade ago.

**Objective:** To assess the current status of intestinal schistosomiasis in Jiga and Bahir Dar towns Northwestern Ethiopia.

**Methods**- A cross-sectional study was conducted in January 2007 in three primary schools in Jiga (Tikur Wuha) and Bahir Dar (Atse Sertse Dengel and Dil Chibo), Northwestern Ethiopia. Stool samples were collected from 1077 school children and processed for microscopic examination by Kato Katz method. Malacological study was also conducted on water bodies in the study areas. Data were entered to Microsoft Excel sheet and cleaned. Then, ported to STATA Version 8.1 software used for further analysis

**Results**- The present prevalence of *S. mansoni* infection among school children in Tikur Wuha (30.8%) was lower than the rate reported in 1987 (33.1%) during schistosomiasis control in the area (*P*=0.38) and in 1983(55.2%) before implementation of control measure in the area (*P*=0.00). While, the present prevalence among school children in Atse Sertse Dengel (4.7%) and Dil Chibo (23.9%) primary school was lower than the rate reported in 1987 in each school (45% for Atse Sertse Dengel and 32% for Dil Chibo primary schools). The range and mean egg per gram of stool (EPG) of *S.mansoni* infection among school children in Tikur Wuha, Atse Sertse Dengel and Dil Chibo primary schools were 24-960(89), 24-72(46) and 24-1512(69), respectively. The highest EPG of by age were in the group 15-19 (112) in 2007 at Tikur Wuha was lower than in 1983 (266) and in 1987(266) at Jiga. While the highest EPG were encountered in the age group 10-14 in Atse setres Dengel (61) and Dil chibo (72) in 2007 was lower than 245 at Atse Sertse Dengel and 128 in Dil Chibo in 1987. *Biomphalaria pfeifferi* snails were collected from Tikur Wuha stream and river Abay didn't shed cercariae.

**Conclusion**- Although the prevalence and intensity of schistosomiasis mansoni was lower than in the early 1990's in both areas, this study recommends school-based preventive chemotherapy and other control measures for further eradication or reduction the disease in each study areas.
ABSTRACT 28

PERCEPTIONS TOWARDS INSECTICIDE TREATED NET AND ITS UTILIZATION BY PASTORAL COMMUNITIES OF AFAR REGION IN ETHIOPIA

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Background: In order to assess the scale-up of malaria control interventions particularly long-lasting insecticide treated nets (LLITNs), there is a need to determine how community perceives malaria, and how they utilize LLITNs. This is especially important in case of Ethiopia after the massive scale-up of anti-malarial interventions such as LLITNs and artemisinin-based combination therapy (artemether-lumefantrine) since the last three years.

Objective: This study was carried out to assess the perceptions and practices about malaria and LLITNs.

Methods: A community-based study was undertaken in May 2008 in pastoral communities of Dewe and Dalifage woredas in Zone five of Afar Region in Ethiopia, where malaria is a major health problem. Two-stage cluster sampling method was used to select 630 study households. Data were collected by trained personnel using a pre-coded and pre-tested questionnaire.

Results: Malaria was perceived as the most important cause of ill health in the area by 99.4% of the respondents. Majority of the study participants believed that malaria is treatable (89%), is preventable (78.3%), could be transmitted from one person to another (86.2%), and incriminated mosquito bite as a cause of the disease (67.1%). Fever (95.7%), headache (81.6%), shivering and chills (74.3%) and vomiting (63.5%) were the most frequently reported symptoms for malaria. Almost all (99.4%) of the respondents had heard about mosquito net. The use of LLITN was perceived as one of the most important malaria preventive methods by 76% of the respondents; and 98.9% and 88.4% perceived that LLITN protects against mosquito bite and malaria, respectively. About 63% and 40% of the surveyed households owned at least one and two LLITNs, respectively. Of 234 households who did not own any mosquito net at
the time of the survey, 95.3% reported that it had been aged or lost. The proportion of households where any member of the household slept under an LLITN in the previous night at the time of the survey was 62.6%. Overall, 31.4% of the total household members, 36.8% of under five children and 35.3% of pregnant women slept under an LLITN in the previous night during the study period.

**Conclusion:** Current efforts to control malaria in pastoralist populations of the present study area seem to be encouraging as suggested by high knowledge about malaria, household possession of LLITNs and to a lesser extent, by its use. Closing this gap requires concerted efforts to change behaviour to ensure that all household members use LLITNs as consistently and correctly as possible.

**ABSTRACT 34**

**USING BURIAL SURVEILLANCE AS A SUBSTITUTE OF VITAL REGISTRATION TO MONITOR THE IMPACT OF ANTI RETROVIRAL THERAPY ON MORTALITY**


**Background** Accurate information on mortality levels and trends in the developing world is hampered by lack of complete vital registration systems. Ideally, all-cause and cause specific mortality rates for the population would be provided by high quality national vital registration systems with death registration completeness of at least 70%. It is important to assess the completeness of death registration to provide evidence on the adequacy of the mortality data. In this study we report results of application of a demographic technique to assess death registration completeness since 2001, and discuss its implications and limitations.

**Methods** The data required is total mid-year population and total deaths registered by 5 year age groups. The 1994 census projections were used to interpolate the total population in Addis Ababa since 2001. Brass Growth Balance method is used to assess adult death registration. The method is based on the finding that in a stable population, partial birth rates and partial death rates from registered deaths have a linear relationship. Separate calculations were also made for males and females. The
plots of partial birth rates against death rates were examined, outliers were removed, and a linear model is fitted. The inverse of the regression coefficient for each model gave the completeness of death registration, while the intercept provided an estimate of the growth rate.

**Results** The analysis showed that the completeness of death registration is 71% (unweighted) and close to 80% (weighted) in 2001. The completeness of death registration keeps on increasing till 2003 with a decline beyond 2003. Male and Female registration follows the same pattern with male decline faster. The population growth rate is close to 2%. Age specific death rate decreases beyond 2003 with male showing rapid decrement than females. The decline in completeness of death registration since 2003 can be linked to a decline in mortality due to ART since ART was started in 2003. The significance of the decline among the adult population can be a more elaborative way of explaining the impact of ART on mortality. Moreover, male are more beneficiaries of ART than females.

**ABSTRACT 37**

**TECHNICAL ISSUES OF SANITATION AND HYGIENE IN MIRAB ABAYA AND ALABA: A Case Study Report from the Southern Nations Region ['SNNPR'] of Ethiopia,**

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**Background:** In most developing countries, especially in Sub-Saharan Africa (SSA) the causes of diseases (more than 80%) are due to inadequate and unsafe water supply, and improper disposal of waste. To draw attention the problem of sanitation and hygiene (S&H), the UN, in its Millennium Development Goals (MDG), set a target that centered on improving sanitation. One of the aims of Goal 7 of the MDGs was to halve the proportion of people without access to improved drinking water and sanitation. SNNPR Bureau of Health (BoH) had launched post-2003 S&H policy to meet MDGs.
**Objectives**: To determine the increase in coverage of household S&H facilities since 2003 (1996 E.C); and to assess physical, environmental and technical factors that affect the construction and use of S&H facilities; and those factors that help sustain their changed behaviour.

**Methods**: This study was conducted in Mirab Abaya woreda and Alaba special woreda. The study employed both qualitative and quantitative research methods in August and October 2007. A survey of 396 households using a structured questionnaire constituted the quantitative component, while Focus Group Discussions (FGDs) and key informant interviews, using a semi-structured interview schedule, formed the qualitative component. In addition, direct observation of hygiene behaviour of household members was also employed in this study. Secondary data sources were also used from relevant offices.

**Results**: Findings from this study indicated that there was a radical change in the construction of latrines in the past 3 years in the case study areas. Half of the constructed latrines were built during the last three years; while more than 57% of the currently available latrines were built during the 2006/7 period (i.e., 1999 E.C). Almost all latrines found, were Traditional Pit Latrines (TPLs). Community Health Promoters (CHP), Health Extension Workers (HEW), Kebele council were the main sources of information regarding latrine construction. Further, the study also found out that there were technical factors that hindered households from using pit latrines. Of significance to note is that most pit latrines collapsed due to the loose nature of the soil, termites affecting the wooden materials, and flooding problems. Technical problems were compounded by a lack of construction materials, mainly wood, and high water table, as well as to foul swell and fly breeding.

Partly as a result of the aforementioned factors, some households dropped off from the good sanitation and hygiene ladder, and returned, temporarily, to open field defecation. Despite the higher achievement in coverage, only 11% of those latrines were actually providing privacy to users. Latrine use was claimed to be close to 100% among those who possessed latrines. Whilst women contributed considerably during the construction of latrines, the main responsibility lied on male household heads. However, the responsibility for preparing hand washing facilities was solely the
domain of women. Water consumption rate in the two woredas of Alaba and Mirab Abaya was found to be very low (7 LCD). Safe water handling was poor, and likely to result in contamination. The availability and usage of Hand Washing Facilities (HWFs) was reportedly very high (>80%). There was poor practice of washing hands after visiting latrines, and use of soaps during hand washing was not customary. The main reasons for not washing hands with detergent were due to lack of in-depth knowledge regarding the use of soap during hand washing after using the latrine, and also due to the fact that most people could not afford to buy soap.

Conclusion: SNNPR BoH Post–2003 (1996 E.C) policy on S&H was very successful in increasing latrine coverage, and this could be replicated elsewhere in Ethiopia and beyond. However, to achieve sustainable Sanitation and Hygiene conditions, and behavioral change, some areas need attention and further support. These include latrine technology options and construction materials, sitting of latrines, hand-washing facilities, hand washing with soap, and safe water handling.

ABSTRACT 38

EFFICACY OF PRAZIQUANTEL AGAINST SCHISTOSOMA HAEMATOBIUM IN DULSHATALO VILLAGE, WESTERN ETHIOPIA

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Background: Control of schistosomiasis is based on chemotherapy, snail control, improved sanitation and health education. Praziquantel (PZQ) is currently the drug of choice for the treatment of schistosomiasis. It has been used extensively and successfully in schistosomiasis control in many countries including pilot control in Ethiopia. However, PZQ efficacy studies conducted in different parts of the world against schistosomiasis showed different cure and egg reduction rates.
Objective: The objective of this study was to determine the current level of PZQ efficacy against *S. haematobium*.

Methods- A prospective study was conducted between October and December 2007 in Dulshatalo village, Benshangul Gumuz Regional State, western Ethiopia. 341 urine specimens were randomly collected from members of the community and tested for haematuria using urinalysis dipstick. All urine samples were preserved in formalin and transported to Aklilu Lemma Institute of Pathobiology and examined using filtration techniques. Subjects positive for *S. haematobium* were treated with PZQ (40mg/Kg body weight). Drug side effects were assessed using a pre-tested symptom questionnaire pre- and 24 hrs post treatment. On the other hand, parasitological cure and egg reduction rates were determined 7 weeks post treatment to determine the efficacy of the drug.

Results: 197 (57.8%) of participants were positive for ova of *S. haematobium* and were treated. 152 of the treated study participants were examined seven weeks post treatment. Presence of *S. haematobium* eggs in urine was associated with haematuria (P<0.001) and proteinuria (P< 0.001). In addition, number of schistosome eggs was significantly correlated with the degree of haematuria (P<0.001) and proteinuria (P<0.001). The cure and parasitological egg reduction rates were 86.8% and 84.67% respectively. Questionnaire based assessment of symptoms revealed a wide range of mild and short lived side effects including straining, abdominal pain, nausea and headache.

Conclusion-The marked cure and egg reduction rates together with the acceptable level of side effects suggests that PZQ (40mg/Kg body weight) is still effective for the control of *S. haematobium* in Ethiopia.

Key words: Efficacy, Praziquantel, *S. haematobium*, Ethiopia.
ABSTRACT 41
IMPACT OF MALNUTRITION IN SURVIVAL OF HIV INFECTED CHILDREN AFTER INITIATION OF ANTIRETROVIRAL TREATMENT (ART)

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Background: Malnutrition is a common condition in HIV-infected children and is a major contributor to mortality in both HIV-uninfected and HIV-infected children. In HIV-infected children, malnutrition has been associated with reduced length of survival and increased infectious complications. However, the impact of malnutrition in survival of HIV infected children after initiation of antiretroviral therapy is not well understood.

Objective: To assess the impact of malnutrition in survival of HIV infected children after initiation of antiretroviral treatment.

Methods: A retrospective cohort study was conducted in HIV infected children starting antiretroviral treatment at Zewditu Memorial Hospital. Demographic, nutritional, clinical and immunological data were carefully extracted from the existing ART logbook and patient follow up cards. Accordingly, nutritional status were defined with stunting (height for age Z score <-2), Wasting (weight for height Z score -2) and under weight (weight for age Z score <-2). Survival was defined as the time from nutritional and immunologic evaluation to death. Data were analyzed for univariate and multivariate analysis using Cox regression proportional hazard model. Survival rate was calculated and compare with the Kaplan Meier and log rank tests using SPSS Version 15.0 software (SPSS INC, Chicago, IL, USA) and EPI-INFO 2002 (Centre for Disease Control and Prevention Atlanta, GA) for Anthropometric data.

Results: A total of 475 HIV infected children starting antiretroviral treatment (ART) from March 21 2005 to 30 April 2008 were included in the study. Of whom 42 (8.8%) died during a median study follow up of 12 months. The average survival time for the entire cohort was 27.9 months. The prevalence of malnutrition in the form stunting, wasting, and underweight at the initiation of ART were, 55.6%, 27.3%, and 61.1% respectively. Furthermore,
independent baseline predictors of mortality were severe wasting (Hazard ratio (HR) = 4.99, 95% CI 2.4 – 10.2, P=0.00), absolute CD4 below the threshold for severe immunodeficiency (HR = 3.02, 95% CI 1.02 – 8.96, P = 0.04) and low hemoglobin value (HR= 2.92, 95% CI 1.3 – 6.7, P=0.001 for those hemoglobin value < 7.0gm/dl) after controlling the possible confounders using Cox model. The mean survival time of female children with wasting was 20.1 months while it was 25.2 months for male children following initiation of ART.

Nutritional change after starting ART at different follow up time showed that a significant increased in median WAZ,WHZ, and BMIZ score at 0,6,12and 24 months respectively P<0.05).

**Conclusion:** Despite the apparent benefit of ART use on HIV related survival, severe malnutrition (WHZ<-3), low absolute CD4 count below the threshold for severe immunodeficiency and low hemoglobin level (Hgb<7.0 gm/dl) remained independent predictors of death among children receiving ART. Moreover, the result obtained in this study showed that malnutrition in the form of severe wasting (WHZ<-3) appear to be strong independent predictor of survival than the CD4 cell count and hemoglobin level.

**ABSTRACT 48**

**ANTIRETROVIRAL TREATMENT ADHERENCE AND ITS DETERMINANTS AMONG PEOPLE LIVING WITH HIV/AIDS ON HIGHLY ACTIVE ANTIRETROVIRAL THERAPY AT TWO HOSPITALS IN OROMIYA REGIONAL STATE**

**Miftah Awel**

**Objectives:** The objective of this study was to determine the degree of antiretroviral treatment adherence and its associated factors in all people living with HIV/AIDS on highly active antiretroviral therapy (HAART) and follow up at ART – units of Adamma and Jimma Specialized Hospitals in Oromiya Regional State from July to August 2006.

**Methods:** a cross sectional survey design, using both quantitative and qualitative methods, was used to conduct the study. A total of 459 people living with HIV/AIDS treated with highly active antiretroviral drugs invited to complete sets of variables using an interview and self-administered methods to elicit information on variables of
the study. Of the total respondents, 265 [57.7%] and 1994 [42.3%] were females and males respectively who participated in this study. A total of 300 [65.4%] respondents were in the age range of 26-35 years while, 94 [20.5%] were in the range of 18-25 years. The significance level was measured using 95% CIs of adjusted and crude odds ratios for which, P<0.05 were considered significant. Discriminate analysis method was used to filter the data for multicollinearity and build a predictive model. Further, the independent predictors of adherence were also assessed using a sequence of two multivariate models.

**Major Findings:** the overall prevalence of HAART adherence was found to be, 381[83.0%] in this study. Independent positive predictors of HAART adherence reported include:- the participants who had: A perception about personal susceptibility to non-adherence threats [OR= 17.388, CI = 4.026 75.096, p = 0.000], ability to adhere in future [OR = 7.212, CI = 3.465, 15.012, p = 0.000], and an access to reliable pharmacy any time [OR = 7.908, CI = 3.296, 18.971, p = 0.000]; had no history of active substance use [OR = 0.387, CI = 0.195, 0.768, p = 0.007], positive beliefs on the efficacy of HAART [OR = 0.449, CI = 0.243, 0.829, p = 0.011], no ARVs side effects [OR = 0.455, CI = 0.224, 0.922, p = 0.029], had no depressed feelings in the last one month [OR = 2.16, CI = 1.32, 6.58, P = 0.001, were not using other drugs along with ARVs [OR = 2.478, CI = 1.121, 5.475, p = 0.025] and had no child under their responsibility [OR = 0.437, CI = 0.218, 0.874, p = 0.019] in the final adjusted model.

**Conclusion & Recommendations:** Selecting a simple and tolerable antiretroviral regimen that matches the patient’s lifestyle and supportive environment to ensure that barriers to adherence were found the most important step toward optimizing adherence. Regimen rehearsal and other assistances must being before patients have their first prescription filled.
ABSTRACT

EVALUATION ON MONITORING SYSTEM OF CARE AND SUPPORT PROGRAM FOR ORPHANS AND VULNERABLE CHILDREN IN ADDIS ABABA HIV/AIDS PREVENTION AND CONTROL OFFICE, ADDIS ABABA, ETHIOPIA, 2008

Hirut Gebretsadik (MSC), Project Appraisal expert in Addis Ababa HIV/AIDS Prevention and Control Office; Amare Deribew (MPH), Assistance Professor in Jimma University, Jimma; Challi Jirra, Professor in Jimma University, Jimma.

Background: monitoring of programs has a great contribution to take evidence-based decision for program improvement. This study aims to assess status of the monitoring system (routine information flow system) of orphan and vulnerable children (OVC) care and support program coordinated by Addis Ababa HIV/AIDS prevention and control office (AAHAPCO).

Method: A cross-sectional facility survey was employed from August 30-October 30 2007 to explore the detail of the monitoring system of OVC support program in both coordinating and implementing organizations. The evaluation was conducted by doing census in areas where OVC care and support program has implemented for more than two years, in Addis Ababa Administrative Region. The study participants were all organization implementing and coordinating the program for more than two years, and Community Home based Care Volunteers (CHBCVs) working for more than a year. Document reviews and interviews of experts as well as CHBCVs were conducted in the data collection process using structured and semi-structured questionnaire. The quantitative data were analyzed using SPSS version 12.0.1 statistical software, whereas the qualitative data were translated into English; similar ideas were grouped in to thematic areas and analyzed.

Results: A total of 24 implementing organizations, 4 Sub-city HIV/AIDS Desks and AAHAPCO were included in the study. Registration books/notebooks were not available in all CHBCVs. But it was available in all implementing organizations. Monthly and quarterly reports were not available in the archive document of all organizations, in three years. According to the judgment criteria, input monitoring system have got 44.2% (inadequate), process monitoring system score 30.15%
Conclusion and recommendation: Function of monitoring system (information flow) is affected by unavailability of registration books/note books, unavailability archives for received report, incomplete report sent in all organizations, and untimely sending reports. Preparing standards for needed information, training on information flow management at all levels, and supervision and feedback, would bring major improvement for quality functioning of the monitoring system (quality information flow).

ABSTRACT 56

ASSES FERTILITY REGULATION METHODS AMONG REMOTE ETHIOPIAN COMMUNITY OF THE HAMER WOREDA SNNPR

Tadesse Alemu Zerfu

Introduction: In developing countries, women continue to give excess births because they lack access to contraception. In alleviating so, modern methods were widely believed to influence fertility worldwide, nonetheless; traditional methods have also been used in fertility regulation in African societies with their own contributions.

Objective: - To asses fertility regulation methods among remote Ethiopian communities of the Hamer Woreda, SNNPR

Method: Community-based cross sectional study conducted in Hamer Woreda of South Regional State, which is 877 Kms away from Addis. The study populations were women of reproductive age group residing in the Woreda. Stratified simple random sampling procedure was carried out to reach at the 382 women included in the survey while purposive sampling was used to reach the 36 key informants of the qualitative study. Data was collected using structured questionnaire complemented by in-depth interviews.

Result & Discussion: In the area, polygamy is a common practice reported to prevail up to 45.5% of married men; in the same way, unintended pregnancy is also not uncommon to present but not welcomed premaritally due to the cultural believe that a premarital delivery is a shameful act leading to great discrimination, hence the only fate of unplanned pregnancy is abortion by the Hamers. Use of natural methods as a
means of traditional fertility regulation method is mainly attributed to the knowledge of the people about it since knowledge and practice gaps are too close. The awareness, knowledge and practice of modern methods are by far less than many figures in the country.

**Conclusion & recommendation:** Different types of traditionally known fertility regulation methods existed in the area including; Post partum abstinence, use of natural methods, Abortion & Infanticide. IEC/BCC of modern methods and establishing reproductive health services that include strengthening the existing but useful traditional fertility regulation methods, introduction of reliable modern family planning methods and possibly establishment of abortion care in the area were recommended.

**ABSTRACT 62**

**INNOVATIVE WAYS OF INTEGRATING TRAINING AND RESEARCH IN ENVIRONMENTAL SANITATION—EXPERIENCES FROM THE SHORT COURSE TRAINING ON SOLID WASTE MANAGEMENT AT JIMMA UNIVERSITY.**

*Alemayehu Haddis*

**Background:** Any training, be it short or long term should aim at transforming knowledge into practice. It is not uncommon to see some workshops and short term trainings ending up to be source of incentives. However, trainings should go beyond material incentives and target towards better performance of jobs and assignments. If properly designed short term trainings can even be a means of doing quality and cost effective research.

**Objectives:** The general objective of this project is to improve the performance of environmental health workers assigned as waste management experts in major cities of Ethiopia and collect baseline data needed for planning of waste management programs using procedures and guidelines in the training modules.

**Methods:** National short course training on Integrated Solid Waste Management was conducted at Jimma University from August 8 – September 24/ 2004 for 14 participants assigned as waste management experts in eleven cities in Ethiopia including Addis Ababa, Dire Dawa, Awassa, Mekele, Harar and Jimma. Priority was given to cities reorganizing their waste management system in the form of Agencies.
Five training modules were developed by senior staff of the school of environmental health on selected topics. The training was accompanied by field visits to see how practically solid waste was managed in cities of Addis Ababa, Adama and Jimma. After completing the 1st 3rd modules participants were sent back for data collection in their respective cities. A uniform set of methods and data collection tools was distributed by the course coordinator. Data quality was monitored by field visits and regular telephone contacts. The data was brought back to JU and presented by each participant. Finally the data was used in developing action plan for each participating city, a very important output to carry back home for implementation.

**Results:** It was possible to produce 14 environmental health personnel certified in solid waste management. This training has also been a good learning ground for the University for developing further trainings. Moreover, the results of the training can be used in further research and planning purposes. Data on Solid waste management, which was scarce in Ethiopia, is now available for 11 cities. Analysis of the data from this training revealed that the waste generation rate for the city of Addis Ababa and that of the national average were 0.27 and 0.31 respectively. It was also found out that nationally 76.6% of the waste was compostable. The collection coverage of Addis Ababa and other large cities was 68% and 43% respectively.

**Conclusion:** Short courses and trainings should be action oriented and address societal needs. Planners in training and research need to have a paradigm shift in organizing such events. A creative and cost effective research design can save time and resources while at the same time improving performance and produce quality data.

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**ABSTRACT 63**

**SOFTENING OF HARDWATER USING SEEDS OF CABBAGE TREE** *(Moringa stenopetala)*

*Amana Jemal, Seid Tiku*

**Introduction:** Hard waters are generally considered to be those waters that require considerable amounts of soap to produce foam or lather and that also produce scale in hot-water pipes, heaters, boilers, and other units in which the temperature of water is increased materially. To the layperson, the soap-consuming capacity is most important because of economic aspects and because of difficulty encountered in
obtaining suitable for optimum cleaning, to the engineer the scaling problem is the most challenging.

Objective: The main aim of the study was to determine the water softening potential of *Moringa stenopetala* at different initial hardness concentration, biomass dosage, pH, contact time and, ionic strength and to elucidate the mechanism of *Moringa*-hardness interaction by doing desorption experiment.

Methods: A laboratory based experimental study was conducted to investigate the hardness biosorption potential of cabbage tree (*M. stenopetala*). The batch removal of hardness from aqueous solutions was investigated. The influence of *Moringa* dosage, initial concentration of hardness, contact time, pH and the effect of sodium chloride was investigated in Jimma University, Environmental Health Science Laboratory from Jan 9 to April 28, 2008.

Results: The optimum hardness sorption by *M. stenopetala* was observed at pH 12. Low sorption capacity observed between pH 4 to 10. High removal efficiency was seen at *M. Stenopetala* dosage of 1g/l and as initial hardness concentration increased sorption capacity reduced. When different concentration of sodium chloride was added, the removal efficiency of *M. stenopetala* seed powder decreased from 53% to zero, due to the competition of ions for the adsorption site. Only 15% of the hardness from hardness loaded biomass was regenerated by 0.02M KCl, the remaining 85% was strongly bound with the positively charged functional groups of the biomass and chemi-sorption is the main mechanism of hardness removal. The adsorption equilibrium data have been fitted very well to Langmuir adsorption model (R² = 0.99).

Conclusion: seeds of *M. Stenopetala* powder reduce hardness causing calcium ion to acceptable level in a batch experiment. The application of *M. stenopetala* seeds as a biosorbent introduces less expensive, environmentally friendly method for removal of hardness from aqueous media.

**ABSTRACT 64**

*Process Evaluation of School-based Adolescent Reproductive Health Education Programmes: The Case of Hawassa City*

*Fikru Tessema, MSc, Environmental Health Department of Federal Ministry of Health, October 2007*
**Background:** The existing young people RH related education programs in Ethiopia have received attention fairly by the Government and NGOs in the past. Some pilot programs are running with regard to reproductive health (RH) related education in schools and out-of-schools in a community in different parts of the country with the support from NGOs. Teachers on the front line in schools recognize that young people need a range of information on RH to support them in making responsible decisions regarding their sexuality. Teenage pregnancy, abortion, sexually transmitted infections (STIs)/HIV and absence of adolescent reproductive health (ARH) related education with ARH services are common RH problems of adolescents.

**Objective:** The overall objective of this evaluation is to assess the implementation process of adolescent RH related education among high schools in Hawassa City, SNNPR, Ethiopia.

**Methods:** A case study design with both quantitative survey and qualitative in-depth interview was conducted in Hawassa City (23 September to 08 October 2007). A pre-tested self administered questionnaires and in-depth interview guide were used to collect data.

**Results:** A total of 436 adolescents participated in student survey, of which about 61.7% were male and 38.3% female. Of the total respondents, 368 (84.4%) reported being taught RH related education in schools. RH related education was being taught in high schools during Biology class with related topics; some times during campaigns and public events. Of the total respondents, 362 (83.0%) also reported having RH related education sessions some times and 6 (1.4%) mentioned during public events. Of the topics included in RH related education in high schools, HIV/AIDS (76.4%), pregnancy (64.9%) and STIs (48.4%) were the most frequently mentioned topics. Of the total respondents, 285 (65.4%) were reported that they participated in extracurricular activities related to RH education in high schools. With regard to training of peers, about 146 (33.5%) of the adolescents were trained in ARH by youth center. Of the total respondents, 204 (46.8%) were also knew counseling & referral services providers for youths with RH problems in high schools. Most RH problems frequently mentioned were HIV/AIDS (71.6%) and followed by unwanted/unintended pregnancy (68.0%) and STIs (43.0%). Most in-depth interviewee (IDIs) explained that the IEC/BCC materials supplied to high schools were too small amount. The student
survey also revealed that about 38.8% of the total respondents read IEC/BCC materials on RH. Of the total respondents to student survey, 367 (84.2%) had information about RH services and RH service providers. In the IDIs, when mentioning roles of parents, peer educators and teachers, they have to develop the habit of free and open discussion on sexuality issues with children and other siblings and facilitate youth friendly environment. Youth dialogue, a new initiative, designed by youth center in which adolescents discuss RH issues and find out healthy ways of dealing with RH problems by themselves.

**Conclusion:** The overall provision of RH related education, participation of in-school youths in extracurricular activities, supply and distribution of IEC/BCC materials on RH in high schools for adolescents were achieved fair results (59%) in compliance with the intentions to reach adolescents with RH related education and information in high schools.

**Recommendations:** Outreach services of the youth center and RH IEC/BCC materials have to target RH related education in high schools for fostering consistently adolescents with knowledge and skills on regular basis with sufficient quantity of the materials by increasing distribution outlets and locally printed materials at regional health bureau and youth center level. New initiative like youth dialogue should be included in youth friendly RH service standards, hence, the Federal MoH should revise its youth friendly RH service standards.

**ABSTRACT 73**

**PREDICTORS OF COMPLIANCE WITH COMMUNITY DIRECTED IVERMECTIN TREATMENT FOR ONCHOCERCIASIS CONTROL IN ETHIOPIA**

Kebede Deribe Daniel Yirga, Kifle WoldeMichael, Mekite Wendafrash, Wondosen Kassahun

**Background:** Although ivermectin is distributed free of charge, not all eligible individuals in the communities receive the treatment annually that poses a serious threat to attempts of the Onchocerciasis elimination program. There is no scientifically documented evidence for the reasons why some people do and others do not take treatment.
Objective: To determine predictors of compliance with Community Directed Ivermectin Treatment for Onchocerciasis and thus provide a basis for understanding how to sustain long term compliance to achieve success in the elimination of Onchocerciasis.

Methods: Unmatched case control study was employed. Cases were, non-compliant, those individuals who had been recorded in the relevant treatment registers during the first treatment round, and didn’t take at least two doses of which one being in the last treatment round(2007). Controls were compliant i.e., those individuals who had been registered on the relevant treatment registers and had taken all the five annual doses of Ivermectin. Data were collected using a pre-tested interviewer administered structured questionnaire.

Results: Up on record review therapeutic coverage in the area was 72.7 % in the last treatment round and individual compliance rate was 56.3%. From the total of 456 individuals selected for administration of the survey questionnaire, 450(225 cases and 225 controls) were contacted and completed the study. Five independent predictors of compliance were identified: being employed [AOR=1.68, 95 % CI, 1.11-2.61], high risk perception [AOR= 1.98, 95% CI, 1.32-2.95], one’s family support [AOR = 1.86, 95% CI, 1.22-2.84], perceiving that the Community Drug Distributors (CDDs) are doing their work well [AOR= 2.84, 95% CI, 1.50-5.37] and perceiving measuring height is the best way of one’s dose determination [AOR=6.37, 95% CI ,2.10-19.29] are positive predictors of compliance to Ivermectin.

Conclusion: Interventions to improve compliance should include prolonging distribution periods, at each treatment round, in order to reach less compliers, health education should focus on epidemiological information in order to increase risk perception and should target family members. Health education should also incorporate information regarding the use of measuring height as it is equally reliable with measuring weight in determination of Ivermectin dose that somebody should take. Finally motivation and continual support to improve CDD’s performance including training and incentives are crucial.

Keywords: adherence, compliance, CDTI, Ethiopia, Ivermectin, onchocerciasis
ABSTRACT 74

HIGH RISK BEHAVIOURS AND ASSOCIATED FACTORS AMONG HIV-POSITIVE INDIVIDUALS IN CLINICAL CARE IN SOUTHWEST ETHIOPIA

Kebede Deribe, Kifle Woldemichae, Mekite Wondafrash, Alemayehu Amberbir, Amaha Haile

Background: People living with HIV (PLHIV) who experience unsafe sex place their sex partners as well as themselves at considerable risks for re-infection and sexually transmitted infections. If their partners were not infected they may pose HIV infection risk also.

Objective: This study was conducted to estimate the prevalence of unprotected sex among PLHIV and to identify factors associated with condom use.

Methods: Hospital based cross-sectional survey was conducted among 705 HIV positive men and women service users in Jimma University Specialized Hospital. Data were collected using structured questionnaire. Associations between condom use and important characteristics were examined using logistic regression analysis with SPSS version 12.0.1 software.

Results: A total of 705 (353 women and 352 men) PLHIV participated in the study, of which 24% (21% men and 26.9% women) reported unprotected intercourse in the most recent sexual episode. Nine percent of the unprotected sex events were with partners perceived to be HIV negative and 39% with partners with unknown HIV status. Moreover, 38% used condom inconsistently since HIV diagnosis. Protected sex at recent episode was independently associated with knowing partner’s HIV status (OR [95%CI] = 2.0[1.2-3.4]), disclosing HIV status to partner (OR [95%CI] = 3.3[1.3-8.2]), antiretroviral treatment receipt (OR [95%CI] = 2.3[1.6-3.6]) and perceiving HIV as less stigmatizing (OR [95%CI] = 1.6[1.1-2.4]). Compared with inconsistent condom users since HIV diagnosis, consistent condom users do not depend financially on others (OR [95%CI] =1.5[1.1-2.4]), disclosed their result to their partner (OR [95%CI] =4.4[1.7-11.5]), perceive HIV as less stigmatizing (OR [95%CI] =1.9[1.3-3.0]) and are antiretroviral treatment recipient (OR [95%CI] =2.5[1.6-3.8]).

Conclusion: Considerable proportions of PLHIV are engaged in high-risk sexual behaviour. These results indicate that there is urgent need for interventions among HIV
positive individuals that will assist them in attaining and maintaining safer sex practices. Efforts to maintain long term safe sex should heed on increasing mutual HIV status disclosure and combating stigma.

**Keywords:** High-risk behaviour, sexual behaviour, PLHIV

**ABSTRACT 76**

**DISCLOSURE OF HIV/AIDS DIAGNOSIS TO HIV-INFECTED CHILDREN IN ADDIS ABABA, ETHIOPIA: A MULTI-CENTER STUDY**

Sibhatu Biadgilign (Bsc, MPHE), Amare Deribew (MD, MPHE), Alemayehu Amberbir (Bsc, MPH, PhD candidate), Kebede Deribe (Bsc, MPH)

**Background:** Pediatric disclosure is an ongoing process and in the best of circumstances may be difficult. The disclosure of a diagnosis of HIV infection/AIDS to a child is becoming an increasingly common clinical issue. Nevertheless, some parents and health care professionals are reluctant to inform children about their HIV infection status. **Objective:** To identify the prevalence and patterns of disclosure of HIV/AIDS diagnosis to HIV-infected children receiving HAART in Addis Ababa, Ethiopia in 2008.

**Methods:** A cross sectional study was conducted in five hospitals in Addis Ababa from February 18- April 28, 2008. The study population was parents /caretaker and index children who were following ART in the health facilities. Structured questionnaire and key informants interview guide were used for data collection. Data were entered into computer and univariate and multivariate analysis were carried out using SPSS statistical software version 12.0.1.

**Results:** Sixty-eight (17.4%) of the children knew their HIV/AIDS status. Ninety-three (29%) of the participants said that they knew the Sero-status of the child 2 years prior to the survey. Forth-six percent of the respondents said that the child should be told about his HIV status when he/she is above 14 years. Fourteen percent pointed out that exactly at the age of 14 years. Sixty percent of the respondents believed that the doctor should reveal the HIV status of the child. Among many variables, medication charge for child treatment before ARV intake [AOR= 0.46, 95%=0.24, 0.88], age group of 3months-5 years [AOR= 9.1, 95%=2.8, 29.37] and 6-10 years [AOR= 4.4, 95%=2.23, 8.45], Perceived awareness of the child on health problem of
caregiver [AOR = 0.445, 95% = 0.22, 0.88], adherence to ART as estimated by physician [AOR = 2.5, 95% = 1.08, 5.81], educational status of the caregiver with unable to read and write [OR = 0.36, 95% = 0.13, 0.99], referred from hospital in-patient ward before attending the HIV clinic [AOR = 4.5, 95% = 1.7, 11.58] were independently associated with non-disclosure to HIV status.

**Conclusion:** Disclosure of HIV/AIDS diagnosis to HIV-infected children in Addis Ababa is low comparing with other developing countries. Health care providers should told the status to the children, advocating screening outside the health facilities where by the child taking the ARV medication, early initiation of disclosure are recommended in Ethiopian context.

**ABSTRACT 85**

**GENERATION AND MANAGEMENT PRACTICES OF HEALTH CARE WASTE IN GENERAL HOSPITALS OF ADDISABABA CITY**

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The waste produced in the course of health-care activities carries a greater potential for causing infection and injury than any other type of waste, and inadequate or inappropriate management is likely to have serious public health consequences and deleterious effects on the environment.

A health facility-based cross-sectional study was conducted from December 2, 2007-January 3, 2008, to assess the rate of generation and existing management practices of health care waste (HCW) in General Hospitals of Addis Ababa city.

A total of 30 (5 Government and 25 Private) hospitals with response rate of 96.7% were included in the study. A structured questionnaire and observational checklist were used as data collection tools. It also involved characterization and weighing of health care wastes from wards of two selected (1 Government and 1 Private) hospitals for ten (10) consecutive days.
The study revealed that the majority 65.5% (N=29) of general hospitals do not practice segregation of HCW at point of generation. In this study, all 100% (N=29) surveyed hospitals used incineration as principal on-site treatment methods. Out of which the majority (82.8%) used single chamber incinerator.

The mean weight of health care waste generated was 70.3 and 141.9 Kg/day for Ras Desta Hospital and MyungSung (MCM) Hospital respectively. The mean percentage composition of the health care waste was found in the following decreasing order: general waste (67.9%) > infectious waste (30.9%) > sharps waste (1.0%) pathological waste (0.2%). The mean generation rates were found to be 0.5 kg/patient/day and 1.6 kg/bed/day.

This study concluded that the current status of health care waste management practices of general hospitals was found far less from World Health Organization (WHO) standards. The study results reinforce the need of urgent attention and significant additional work on health care waste management of the capital by all concerned.

**ABSTRACT 86**

**ASSESSMENT OF THE HEALTH CARE DELIVERY SYSTEM FOR ACTIVITIES TO DECREASE THE BURDEN OF TB AMONG PLHIV IN ADDIS ABABA, 2008**

*Amenu Wossen*

**Background:** The dramatic spread of HIV epidemic throughout sub-Saharan Africa in the past decades has been accompanied by up to a fourfold increase in the number of Tuberculosis (TB) cases registered by national TB programs. In contrast to the practice before when TB and HIV/AIDS Prevention and Control Programs pursued separate courses, now they need to work in close collaboration and avail comprehensive services.

**Objective:** To assess the Health Care Delivery System for activities related to decreasing the burden of TB for People Living with HIV (PLHIV) in Addis Ababa City Administration.
Materials and methods: Between February and May 2008, a cross sectional facility based survey was conducted using exit interview of 406 People Living with HIV from HIV chronic case clinics of selected six health facilities in Addis Ababa. This was supplemented with in-depth interview with health care providers and coordinators for the TB/HIV collaborative activities in the city. The findings were described and analyzed using SPSS version 11.

Results: Based on our findings, 89.7% of clients were screened for TB at least once during their follow-up visits. Overall, 43.1%, of PLHIV have ever been diagnosed as having TB in their life time; the majority (67.4%) developed before they learnt their positive HIV status and 33.0% of these were diagnosed during screening at HIV chronic care clinics. Being diagnosed as having TB was more in males than females with AOR (95%CI) 2.18 (1.30-3.66). Having information about the availability of preventive therapy for TB among PLHIV was 29.8%, whereas; the proportion of PLHIV who were free from TB but provided with IPT was 32.0%. Females were better informed about availability of IPT service in health facilities by two folds than males with AOR (95%CI) 2.18 (1.31-3.61). Lack of consistency regarding IPT provision among health care providers was rampant.

Conclusion: In general, the findings in this study revealed that activities to decrease the burden of TB among PLHIV in HIV chronic care clinics were not discouraging. The City Administration Health Bureau and health facilities need to be strengthened with trained human power and materials to properly monitor and implement activities to decrease the burden of tuberculosis among people living with HIV.

ABSTRACT 88
SERODIVERSITY AND ANTIMICROBIAL RESISTANCE PATTERN OF SHIGELLA ISOLATES AT GONDAR UNIVERSITY TEACHING HOSPITAL, NORTHWEST ETHIOPIA

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Background: The emergence and dissemination of multiple-drug resistance strains of Shigella which cause shigellosis are becoming a series global problem, particularly in developing countries due to indiscriminate use of antimicrobial agents and very poor
hygienic practices. In Ethiopia, the diversity of *Shigella* strains and their antimicrobial susceptibility is not well studied.

**Objective:** This study was carried out to determine the prevalence of serogroups, serotypes and antimicrobial resistance pattern of *Shigella* isolates from patients with acute diarrhea.

**Methods:** A cross-sectional study was conducted from August 1, 2006 to February 10, 2008, involving outpatients with acute diarrhea in Gondar University Teaching Hospital, Gondar, Ethiopia. Consecutive stool specimens were received from the patients and cultured for *Shigella*. *Shigella* isolates were confirmed by biochemical and serological tests. Antimicrobial susceptibility testing of all strains was carried using the single disc diffusion technique of Kirby and Bauer.

**Results:** Of the 1200 stool samples, 90 (7.5%) yielded *Shigella* isolates with the following serogroups: *S. flexneri* (72.2%), *S. dysenteriae* (10.0%), *S. boydii* (8.9%) and *S. sonnei* (8.9%). The commonest serotypes were *S. flexneri* type IV (24.6%), *S. dysenteriae* type 2 (33.33%), *S. boydii* types 2 and 5 (each 25%), and *S. sonnei* phase I (75%). Eighty five (94.5%) of the isolates showed resistance to one or more drugs of which 71 (78.9%) were multi-drug resistant. *S. flexneri* showed the highest multi-drug resistance (91.2%) than the other species. Resistance to ciprofloxacin and norfloxacin, respectively, was observed in 2.2% and 1.1% of *S. flexneri*. No *Shigella* isolate was found resistant to nalidixic acid or ceftriaxone.

**Conclusion:** Our results demonstrate *S. flexneri* as the predominant serogroup causing more than 70% of the *Shigella* cases in Gondar area, higher rates of multi-drug resistance to commonly used antimicrobial agents, emergence of resistance to ciprofloxacin and norfloxacin and no resistance to nalidixic acid and ceftriaxone. On the basis of these findings, we recommend ciprofloxacin and norfloxacin for empirical treatment of shigellosis with continuous monitoring of the distribution of serogroups, serotypes and antimicrobial resistance patterns and reservation of nalidixic acid and ceftriaxone for very severe cases of shigellosis.

**Key words:** Shigella, serogroups, serotypes, antimicrobial resistance pattern
ABSTRACT 90

IMMUNE RESTORATION DISEASE AFTER THE TREATMENT OF HIV-INFECTED PATIENTS WITH HIGHLY ACTIVE ANTIRETROVIRAL THERAPY IN ADDIS ABABA, ETHIOPIA

Kahsay Huruy, Afework Kassu, Andargachew Mulu

Background: Highly active antiretroviral therapy (HAART) improves the immune function and decreases vulnerability to opportunistic infections (OIs). However, the introduction of HAART presents new clinical problems that are a result of the restoration of the immune response. These diseases called immune restoration disease (IRD). The IRD occurred with unusual manifestations of OIs with increasing CD4 count followed by decreasing viral load.

Objective: This study was undertaken to determine the frequency of IRD and possible risk factors among 1181 HIV/AIDS patients at Zewditu memorial hospital, Addis Ababa from September 2005 through August 2006.

Methods: Data on antiretroviral therapy, socio demographics characteristics, clinical outcome including development of IRD, pre- and post- HAART CD4 count, liver function tests, white cell count and hemoglobin values before and after the antiretroviral treatment were taken from charts and computerized clinic record.

Results: The frequency of IRD in this study was 14.4% (170/1181). The duration of IRD occurrences was in mean days of 96 with SD of 89. Diagnoses included tuberculosis 66.5% (113/170) of which 47.8% (54) extra pulmonary tuberculosis, 46% (52), pulmonary tuberculosis, 6.2% (7) were disseminated tuberculosis, Toxoplasmosis and herpes zoster rash 12.9 % (22/170) each, Pneumocytis pneumonia 4.1% (7/170), cryptococcosis 3.5% (6/170). Compared to the baseline readings there was significant increase in CD4 count, white cell count, aspartate aminotransferase and alanine aminotransferase levels while the hemoglobin values and alkaline phosphatase were not significantly increased during the development of IRD. In logistic regression analysis, lower CD4 count at HAART initiation was a risk factor for developing IRD. Eight deaths were attributable to IRD.

Conclusion: The occurrence of IRD in this study was 14.4% and the pattern of OIs in HAART treated patients in the study area reflected those reported in other countries.

Key words: HIV, HAART, immune restoration disease, opportunistic infections, risk factors
POSTER PRESENTATIONS
Background: About 450 million people suffer from mental disorders worldwide (WHO, 2000). Refugees may encounter mental distress because of lifetime experiences and sexual violence in their country of origin.

Objective: The general objective of this research was to assess the prevalence of mental distress and sexual violence among refugees at Sherkole Camp.

Methods: A survey study was conducted on total of 485 refugees and national staffs at Sherkole Camp from September 2007-2008. Both quantitative and qualitative methods were administered for data analyses. The data quantitatively analyzed by percentage and chi-square and qualitatively analyzed by grouping in main themes. To achieve the objectives of the study in question, 450 randomly selected refugees, 28 purposefully selected refugee social workers and national staffs, 2 purposefully selected rape survivors and 5 key informants participated in the study. Different data collection instruments (SRQ 20 scale, interview focus group discussion and case history) were employed to gather the necessary data. Percentage and Chi-square were administered to analyze the obtained data.

Results: The prevalence of mental distress among refugees was found to be 44%. About 56.97% of the respondents surveyed in the study had thoughts of ending their life in the past 30 days. Reported mental distresses significantly differ among female and male respondents. More females 175 (83.33%) than males 160(72.72%) were found to suffer from mental distress($X^2=7.02$, df=1, $P=0.008$). Furthermore, the prevalence rate of mental distresses were high among non Sudanese than Sudanese ($X^2=58.6$, df=1, $P=0.000$) refugees. On the other hand, the prevalence of sexual violence among refugees was found to be 52.38%. Far distance between tap water and shelter, intoxication and lack of awareness were among reported causes of sexual violence. Unwanted pregnancy, gynecological complications, sexually transmitted disease (STD), mental illness, suicidal feeling were found to be major consequences of sexual violence.
Conclusion: The study has shown that there is high level of mental distress and sexual violence among refugees at Sherkole Camp.

Recommendations: - Awareness creation, counseling and psychosocial supports are recommended.

ABSTRACT 11
ASSESSMENT OF COMMUNITY PERCEPTION, BELIEFS, AND ATTITUDES TOWARDS MENTAL ILLNESS AMONG ADULTS, IN MEKELLE, TIGRAY, ETHIOPIA

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Background: - In Ethiopia mental illness is becoming one of the public health problems. Community psychiatric-mental health studies are essential for the planning and development of psychiatric-mental health services. However, few such studies have been carried out to date in Mekelle, Tigray, Ethiopia.

Objectives: - To assess community perception, beliefs, and attitudes towards mental illness.

Methods: - A community based cross-sectional survey was conducted in Mekelle town in September, 2007. Three kebeles from the ten in the town were randomly selected, and proportionally from the three kebeles 443 heads of households were interviewed by trained nurses using a semi-structured, pre-tested questionnaire and analyzed by SPSS Version 13.

Results: A total of 443 heads of households were interviewed with the response rate of 99.6%. Most of the respondents were Females 233(52.8%), the mean age of the respondents was 35.18, SD=12.84. The most common perceived cause of mental illness was brain disease 231(52.40%), followed by life events 228(51.70%). The most common symptoms proffered by respondents as a manifestation of mental illness included aggressiveness 321(72.80%), talkativeness 312(70.70%), and restlessness 302(68.50%). About 80.30% respondents opted for modern medical care for mental illness, while 68.70% were more inclined to the use of holly water and 13.60% suggested that there is no cure of mental illness. Majority 415(94.1%) of the
respondents were benevolent (showed positive attitude towards the mentally ill). Literate respondents were more likely to prefer modern medicine for mental illness as compared to those non-literates (OR=3.78, 95% CI= 2.27-6.29, p-value= 0.000).

**Conclusion and recommendations:** Though, better understandings of mental disorders and positive attitude was seen among the public, provision of education to the community aimed at demystifying mental illness would lessen misperceptions, wrong beliefs, and stigmatization and encourage the use of currently available and effective interventions.

**Key words:** Mental Illness, Perception, Belief, and Attitude.

**ABSTRACT 12**

**GENETIC CHARACTERIZATION AND PROGRESSION OF B3 MEASLES GENOTYPE IN ETHIOPIA: A STUDY OF FIVE MEASLES OUTBREAK CASES**

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**Background:** One of the countries where measles remains endemic is Ethiopia. Previously, sequence data from Measles Viruses (MV) circulating in Ethiopia were obtained from clinical specimens. Now the Ethiopian Health and Nutrition Research Institute (ENHRI) has implemented cell culture techniques to isolate measles virus and molecular epidemiologic studies can be generated more easily.

**Objective:** To characterize the strains of Measles Virus circulating in Ethiopia during measles outbreaks in 2006 using viral isolates, and compare the results to previously identified Ethiopian strains.

**Methods:** A case study and convenience sampling method were conducted on five measles outbreak cases to identify the circulating measles virus genotype in Addis Ababa and Amhara regions of Ethiopia in 2006.

**Results:** Three isolates were obtained from five specimens collected in two regions (1 from Amhara: Bahir Dar, and 2 from Addis Ababa: Addis Ketema and Kolefe Keranio
subcities) in Ethiopia during 2006. The viral isolates were analyzed using standard genotyping protocols and were classified as genotype B3, identical to the strain circulating widely in West Africa and imported into Europe (Britain, Netherlands, Germany) and America (Mexico, USA, Canada).

**Conclusion:** The conserved sequences among three isolates, covering a 3-month period, suggest that this B3 strain was circulating in Addis Ababa, Bahir Dar and possibly elsewhere in Ethiopia. To interrupt the transmission and circulation of MV, Ethiopia needs a strong national program of epidemiological surveillance, with characterization of circulating MV performed in a timely manner.

**ABSTRACT 20**

**INTEGRATION OF REPRODUCTIVE HEALTH AND ENVIRONMENTAL PROTECTION THROUGH NON-FORMAL EDUCATION**

*Mengistu Asnake (MD, MPH), Bogalech Alemu (MSc)*

**Background:** The positive influence of education on the RH behaviors of women is well documented but nearly 66% of women in Ethiopia have had no education and 69% cannot read. With such a high rate of illiteracy, efforts to change the RH knowledge and behavior using traditional communication channels that require basic literacy will not be effective.

Considering the influence of formal and non formal education on overall behavioral change, Pathfinder International/Ethiopia, in collaboration with the Southern Region Women’s Association, initiated the integration of RH and environmental protection information through non formal education to rural women in two woredas (Dara and Boricha) in late 2006. The non formal education included literacy and numeracy applied to RH, reproductive rights, environmental protection, and other health issues. The project was implemented for one year and reached 1,615 women of reproductive age. The course included 2 hours of classes on reading and writing, three days per week. Reading lessons incorporated issues related to RH and the environment. Community conversations about Family Planning (FP) and other RH topics were held every two weeks to complement the classroom teaching.
Woreda-level government offices, including the offices of health, education, agriculture, justice, HIV/AIDS secretariat, women’s affairs, and faith-based institutions assigned experts to work on the project and provided seedlings for vegetables and fruit trees and monitoring of on-going activities.

**Objectives:** Examine the integration of Reproductive Health (RH) and environmental protection through non formal education; describe the effects of the integration process on health, environment, and literacy; and adapt successful features of the process to other settings.

**Methods:** Pathfinder performed a pre- and post-intervention assessment of the women’s RH knowledge, attitudes and practices using a questionnaire prepared for the intervention. Key informant interviews were performed with selected participants, facilitators, and representatives from government offices.

**Results:** Almost 93% (1,495) of the women who started the program attended the whole course and were able to read and write numbers and words at the end of the year. Many were interested in continuing formal education and enrolled in nearby primary schools. Twenty-eight percent began using contraception and 21 women who were practitioners of female genital cutting abandoned the practice. During the intervention period, the women planted a total of 4,000 fruit trees and each participant received seedlings for green vegetables, which have contributed significantly to nutrition and income generation.

**Conclusion:** Addressing development issues requires an integrated approach and concerted effort from many sectors. Increasing women’s literacy through non formal education makes women likely to adopt healthy behaviors such as using FP. Non formal education helps women understand behavior change communication materials and make decisions according to the information they learn. The inclusion of issues such as RH, and environmental protection increases women’s interest in the literacy sessions.
ABSTRACT 27

ASSESSMENT OF QUALITY OF ANTENATAL–LINKED HIV COUNSELING AND TESTING AS AN INTERVENTION FOR PMTCT IN SELECTED PUBLIC HEALTH CENTERS IN ADDIS ABABA, ETHIOPIA

Hussein Ismail Shafi (BSc, MPH), Ahmed Ali (BSc, MPH, PhD, Professor)

Background: The most important component of the PMTCT program is HIV Counseling and Testing (HCT). A high quality of HCT is essential for success. In Ethiopia PMTCT services began in 2003, but only 0.8% of HIV infections among births to HIV positive mothers were averted in 2005/6 through PMTCT.

Objective: The aim of this study was to assess the quality of antenatal–linked HIV counseling and testing as an intervention for PMTCT at ten Public Health Centers in Addis Ababa City.

Methods: A cross sectional study was conducted at purposively selected 10 health centers in Addis Ababa from April to May 2008. Methods included structured observations of counseling sessions, key informant interviews and 422 client exit interviews. Data on client satisfaction, counselors’ communicative skills, duration and content of pre- and post test counseling was collected using a structured questionnaire adopted from USAIDS tools. SPSS version 15.0 was used to enter, clean, and analyze the data. Descriptive and analytic statistics were computed for most of the variables.

Results: All of the health centers offered pre- and post test counseling; 60% of the health centers had an HCT uptake rate of 90 to 100%, and 80% of the health centers had a return rate of 90% to 100% to collect the test results. A total of 66 (31 pre- and 35 post test) counseling sessions were observed. The mean duration of pretest counseling was 5.37 minutes (±3.34) and that of post test was 3.0 minutes (± 2.24). In 78.8% of the sessions, the counsellors gave clear and simple information to the mothers; in 54.5% of the sessions, misunderstandings or incorrect beliefs of the mothers were assessed and corrected; in 25.8% of the sessions, the mothers were not given the chance to freely consent or dissent for blood test. In the post test sessions, 42.9% of the mothers’ understanding of the meaning of their test results was not explored. Majority, 62.0% of the exit clients reported that they had understood well the counseling on HIV/AIDS, 68.2% the issues related to PMTCT, 26.0% understand the counseling on infant feeding; however, 21.3% didn’t know why HCT was offered
during pregnancy. The odds of knowing why HCT is offered during pregnancy was higher among residents of Addis Ababa and clients who spent 5-15 minutes on discussion [OR = 4.48, 95% CI: 1.84, 10.9 and OR=2.1, 95%CI: 1.03, 4.24 resp.]. Generally 89.8% of the clients reported being satisfied with the pre-and/or post testing counseling discussions. Clients counseled for >15 minutes were 11 to 12 time more likely to be satisfied with the counseling services they received (OR = 11.06 95% CI: 3.331, 36.737).

**Conclusion:** The communicative skill of the counselors was generally ‘satisfactory’. The majority of pre- and post test sessions included the basic information on HIV transmission/prevention and PMTCT. However, the discussions were unusually too brief, rudimentary and lacking depth/and coverage. Nearly a quarter of the exit clients didn’t understand why they were offered HCT particularly during their pregnancy time; however, the vast majority of the women interviewed were satisfied with the counselling and counsellors interactions.

**Key words:** PMTCT, HCT, quality, Counselors’ skills, Satisfaction: Addis Ababa

### ABSTRACT 31

**TIMING OF FIRST ANTENATAL CARE BOOKING AT PUBLIC HEALTH INSTITUTIONS IN ADDIS ABABA**

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**Background:** The purpose of ANC is to improve pregnancy outcome for both the mother and the fetus. ANC is more beneficial in preventing adverse pregnancy outcomes when it is sought early in the pregnancy and continued through to delivery. However, existing evidence from developing countries including Ethiopia indicate that few women seek ANC at early stages of their pregnancy.

**Objective:** The objective of this study was to assess timing of first ANC booking and factors that influence the booking time.
Methods: A cross sectional study design was used to collect data using structured questionnaire from 630 pregnant women who were attending ANC service at 10 government health centers in Addis Ababa from March 1 to 30, 2008.

Results: The proportion of respondents who were first visit ANC within the recommended time [12 weeks of gestation] was 40.2%. The timing of first booking ranged from 1- 9 months of gestation from the last menstrual period. The mean timing was 4 months [SD=1.8]. Bivariate analysis showed that respondents with high school and above in education, parity zero, who received advise on timely booking, pregnancy was planed and past experience of timely booking were more likely to start first antenatal care within the recommended time compared to others. Multivariate analysis showed that respondents with parity zero, respondents who said their pregnancy was planned and who received advice on advantage of early booking were more likely to book timely compared to others [OR= 1.860, 95% CI: 1.005, 3.441], [OR=1.918, 95% CI:1.105,3.328] and [OR=10.236, 95%CI: 4.580, 22.875) respectively.

Conclusion: Majority of pregnant mothers do not practice early booking of first ANC provided that the service is accessible. In order to improve the situation, implementation of focused antenatal care, clear guidelines for the service, and the need for capacity building are important.

ABSTRACT 32

ASSESSMENT OF QUALITY OF ART SERVICE IN FELEGE HIWOT HOSPITAL, BAHIR DAR

Background: Providing quality ART service is an important task for care providers to increase adherence and to respond to the HIV emergency; however, little is known about the existing quality of ART services in Ethiopia.

Objective: The aim of this study was to assess the quality of ART service provision in Felege Hiwot Hospital, Bahir Dar.

Methods:- A cross sectional quantitative study which is supplemented with a qualitative research method was conducted from November –December 2007. A total of 422 adult PLWHA on ART for at least 3 months were the study participants. Data were collected using structured questionnaire, check lists and semi structured interview guide. After clearing and checking for consistency data were coded, entered and
Univariate & Multivariate analysis were carried out using SPSS version 15.0. Qualitative data were transcribed & narrated under themes.

Results: Based on the check list, structure & process result reveals, most of the requirements for implementation of ART services were fulfilled; Although, lack of ophthalmoscope in clinical package; absence of confidential counseling room in pharmacy package; lack of separate room, shortage of equipment and supplies, absence of CD4 count machine in laboratory package were seen. Over all client satisfaction rate was 70.9%. In relation to adherence to ARV treatment, 7 days dose adherence rate at ≥95% requirement by self report method was 92.4%. Duration on treatment was significantly associated with adherence. Patients who were on treatment for 13-24 months were found to be more adherent [OR 8.14, CI 95% 1.03-64.26] than patients who were on treatment for 3-6 months.

Conclusion and Recommendation: The structure and process of ART services almost fulfills the minimum requirements for implementation of ART at regional level compared with the guideline. On outcome indicators; client satisfaction and adherence of clients to ART were high. However, to achieve the goal of ART and its impact; providing updated & adequate training on comprehensive HIV/AIDS care, increasing number of rooms & staffs trained on ART, addressing functional equipment & supplies in laboratory package, working with religious leader and community leaders to strengthen adherence status are recommended.

ABSTRACT 33

IMPLICATIONS OF THE HIV TESTING PROTOCOL FOR NON-RESPONSE BIAS IN SEROPREVALENCE SURVEYS

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Background: HIV prevalence estimates from seroprevalence surveys are potentially biased by different forms of non-response. Here, we investigate the effect of different study protocols for the disclosure of HIV test results to respondents on non-response bias.

Methods: Nine-month surveillance of hospital admissions in Addis Ababa whereby patients were approached for an HIV test. Patients had the choice between three
consent levels: testing and post-test counseling, testing without post-test counseling, and total refusal. For all patients, information was collected on basic socio-demographic background characteristics and admission diagnosis. That information is used to predict HIV status in those who refuse testing. We first investigate the covariates of different levels of consent. We then quantify bias in HIV prevalence estimates due to refusal for testing via Heckman regression models that account for sample selection.

**Results:** Refusal positively correlates with the likelihood of infection, but the magnitude of the non-response bias in HIV prevalence surveys depends on the study protocol: if disclosure of HIV status is implied in study participation, the bias is likely to be much larger than in a scenario where respondents can decline post-test counseling. We also find that consent for testing increased since the introduction of antiretroviral therapy in Ethiopia. Other covariates of refusal are age, gender, marital status, educational status and counselor.

**Conclusion:** Disclosure or non-disclosure of test results to study participants is an important consideration in studies that wish to minimize non-response bias in HIV prevalence surveys. The availability of ART is likely to reduce refusal rates.

**ABSTRACT 61**

**ENVIRONMENTAL HEALTH SERVICES IN ETHIOPIA WITH PARTICULAR EMPHASIS TO SANITATION AND HYGIENE PROGRAM ORGANIZATION AND MANAGEMENT**

Alemayehu Haddis, Jo Smet and Peter Newborne

**Background:** Diarrhoeal diseases attributable to poor sanitation kill 3.3 million people annually on a global basis and 2.6 billion people lack improved sanitation. In Ethiopia, despite the relatively longer environmental health services history, 60-80% of communicable diseases are due to lack of sanitation and hygienic practices. Access to improved sanitation and hygiene practices is believed to significantly reduce diarrhoeal disease burden, improve quality of life and productivity.

**Objectives:** To assess the organization resource allocation and management of environmental sanitation programs in Ethiopia
Methods: An extensive literature survey was conducted from June–October 2007 to retrospectively examine the status of environmental health with particular emphasis to sanitation and hygiene practices in Ethiopia with respect to program organization, policy and legal provisions, resource allocation integration and socio cultural aspects of latrine utilization and technology choices.

Results: It was found out that after passing through a well documented history of environmental health service for the last 5 decades, sanitation coverage for Ethiopia is lower than the sub Saharan average. The sanitation coverage for Ethiopia has shown a decline from 8% in 1995 to 6% in 2005. There was only very little achievement against a variety of strategies and huge resource flows to environmental sanitation in the past 50 years. The existing low level of water supply coverage was exacerbated by poor water handling and storage practices. Some studies in Ethiopia have identified that 40% of stored water was found to be contaminated by faecal coli forms after being drawn from protected sources. People give more emphasis to hand washing after eating than before eating or after defecation. Latrine utilization remains at 11.5% nationally, i.e., 3.9% for rural and 49.7% for urban areas.

Conclusion: Sanitation and hygiene promotion programs need more than just political will and availability of favourable policies. Socio-cultural and technical issues must be addressed to get effective results. Poor integration, donor driven technology choice and inefficient utilization of resources are major problems to be addressed.

ABSTRACT 65
SYNERGY AND COMPLEMENTARITY BETWEEN THE HEALTH EXTENSION WORKERS (HEWs) AND COMMUNITY BASED VOLUNTEERS IN OROMIA REGION, ETHIOPIA

Frehywot Eshetu, MD, MPH, Endale Workalemahu, MD, Barbara Pose, MD, MPH, .

Introduction: The Health Extension Program (HEP) is an innovative health care delivery mechanism which forms the necessary linkages between the community and primary health care services. A community promotion program through volunteer/private sector community promoters/ CBRHAs can serve as an opportunity if synergized with the HEP.
Objectives: To assess the existing synergy/complementarities between HEWs and community-based volunteers in the service provision, to assess the motivating factors that influence the work of volunteers, and to assess the perception of stakeholders on the work of the volunteers.

Methods: The study was entirely qualitative using Focus Group Discussions (FGDs) and In-depth interviews (IDIs) using pre-structured guiding questionnaires. The study was conducted in West Harerge and Borena Zones of Oromia region. The selection was made to represent the sedentary and pastoral community among the zones where CARE Ethiopia is operating with community volunteers. A total of 12 FGDs and 19 IDIs were conducted with community volunteers, HEWs, health professionals, woreda level partners, community members/leaders and CARE Ethiopia staffs. The data was collected until the point of saturation and assessed thematically.

Results: Almost all stakeholders including the HEWs recognized the roles the community volunteers are playing, mainly on social mobilization, house-to-house health education, distribution of contraceptives, promoting the work of health extension workers, strengthening referral linkage and assisting home deliveries. It was revealed that the HEWs and volunteers work closely in many ways and some HEWs even report that the volunteers are serving in introducing them to the community. The major challenges mentioned which de-motivate volunteers are the absence of regular supportive supervision, the lack of continuous logistic support for their service provision, the lack of capacity building trainings, the lack of recognition from the government partners, the lack of holistic intervention.

Recommendations: The study showed that the community volunteers are one of the key opportunities which can be utilized to strengthen the HEP. Therefore, due attention has to be given and regular supportive supervision should be provided by woreda health office to enhance their role in the community level intervention. Governmental and non-governmental organizations should be involved in motivating the work of volunteers, building their capacity and strengthening their linkage with the HEWs. A standard implementation guideline for community volunteers needs to be developed by the government to have a uniform implementation modality by all partners and ensure their recognition in the health care system.
ABSTRACT 66

ASSESSMENT OF THE ANTIFUNGAL ACTIVITY OF GRADIENT EXTRACTS OF RUMEX ABYSSINICUS JACQ

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Background: In the setting of HIV and organ transplantation, opportunistic fungal infections have become a common cause of morbidity and mortality especially in the developing countries. Throughout the history and across the globe, the plant kingdom has provided a variety of medicines. In modern times, plants have been a source of analgesics, anti-inflammatory, anti-neoplastic drugs and medicine for asthma, anti-arrhythmic agents, anti-microbial agents and antihypertensive agents. Rumex abyssinicus is one of the medicinal plants (herbal medicines) used to treat different diseases. Traditionally, it is used to treat skin mycosis (quakucha), skin infections and the root powder pasted with lime juice applied for Tinea nigra and Tinea versicolor. Thus, this study was concerned with evaluation of the anti fungal activity of Rumex abyssinicus.

Objective: To assess in vitro anti-fungal activity of methanol, petroleum ether and Chloroform extracts of root part of Rumex abyssinicus.

Methods: Rumex abyssinicus was collected from West Shawa, Gindeberete Woreda, specific area called Rasso and the Taxonomic and species identification was determined at Biology Department Herbarium, Jimma University. The dried root of the plant was powdered. Extraction of the gradient extracts was carried out using Soxhlet apparatus while an experimental study was carried out during April 15 2008 - May 15 2008 and the methanol and organic extracts were tested for antifungal activity on SDA and SDB. Finally, the standard organisms were inoculated and the results were observed after 24hrs, 72hrs and five days incubation to see both antifungal activity using disc diffusion method and Minimum Inhibitory Concentration (MIC) was determined.

Results: Among the three extracts obtained, only the methanol extract of the plant Rumex abyssinicus exhibited anti-fungal activity against C neoformans (CRYNE-02).
The antifungal activity studied on C.albicans and T. mentagrophytes demonstrated no activity.

**Conclusion**: Rumex abyssinicus root extract showed strong antifungal activity against C.neoformans.

**Recommendations**: Rumex abyssinicus is a promising medicinal plant so that the responsible bodies should cultivate, protect and conserve the plant.

**Key words**: traditional medicine, Rumex abyssinicus, antifungal activity, MIC.

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**ABSTRACT 67**

**MANDATORY HIV TESTING IN PREGNANT WOMEN IN SSA: ANALYSIS OF DECISION MAKING FOR HIV TESTING IN PREGNANT WOMEN USING THE CAPABILITY APPROACH**

*Adamu Addissie Nuramo and Corrado Viaforra*

**Background**: The HIV/AIDS pandemic, despite three decades of dealings with it, remains with robust ethical queries and dilemmas. One of the ethical dilemmas in this realm is related to the most promising and effective innovations for the prevention of mother to child transmission (PMTCT) of HIV infection, a dilemma about the right way of ensuring that all potential vertical HIV infections are prevented. The issue has gained more interest and due focus in HIV testing policies of pregnant women especially in the sub-Saharan Africa. The controversial issue is whether it is ethical to let a pregnant woman make a decision to forego HIV testing to the extent of refusing test and treatment at the potential expense of the life of the would-be-born child? HIV testing of pregnant women is an important entry point to benefit from PMTCT programs. It is observed that a number of women may decline HIV testing and fail short of benefiting from the program. Because of this, there is an urgent need to look for ways of maximising the number of pregnant women being tested for HIV to the extent that all are tested in areas of high HIV prevalence such as Sub-Saharan Africa. The available options include an opt-out testing approach and mandatory testing. Mandatory testing has gained much attention recently and there is an ongoing dialogue on the relevance of mandatory HIV testing in pregnant women. Is such an interceptive approach worth considering?
Objective and Methods: The objective of this paper is to assess the ethical issues around HIV testing in pregnant women with critical focus on mandatory HIV testing. The capability approach, apart from utilitarian, liberal and communitarian perspectives, is used for elaboration and ethical deliberation.

Results and Discussion: The capabilities and functioning’s of women are very important in the understanding of the status of vulnerable group like women of the developing world. Even though in utilitarian terms, mandatory HIV testing of all women coming for a prenatal care is assumed to be of maximum effects, this is yet practically unproved assumption which has rather problematic ethical issues that need due reconsideration. Informed-consent and counselling should not be skipped in such emotionally engaging and psychologically affecting test. Providing HIV testing in a forced and coercive way can work rather negatively against the effectiveness of the PMTCT program; women will lose confidence in the health care system, they shy away from services and there results big uncertainty about the subsequent cooperation of the women in the rest of the PMTCT interventions i.e. compliance to treatment, breastfeeding options and medical follow-up. This will put the practical effectiveness of the approach into question. There is rather a need to analyse the capabilities that women have in decision making in important and sensitive issues. The analysis is of more importance for women who have a vulnerable position socially, biologically, intellectually and economically; which is the case in the Sub-Saharan Africa. Due emphasis needs to be given for the decision making capabilities of women and the factors playing determinant role in their decision making.

Conclusion: Without addressing their capability coercion will have dire effects. Acknowledging this fact, any kind of maximisation of HIV intake needs careful thought and ethical analysis before implementation because of the nature of the test and the interplay of factors in determining the effectiveness of such an approach. In this regard an ‘opt-out’ strategy of testing gives a better position for pregnant women to act based on their capabilities.
ABSTRACT 69

HEPATOTOXIC EFFECTS OF HIGHLY ACTIVE ANTIRETROVIRAL THERAPY ON SUBJECTS INFECTED WITH HUMAN IMMUNODEFICIENCY VIRUS AND ROLE OF HEPATITIS B AND /OR C VIRUS INFECTION, AT JIMMA UNIVERSITY SPECIALIZED HOSPITAL, JIMMA ZONE SOUTH WEST ETHIOPIA

Daniel Emana, Fikadu Demissie, Worku Bedada,

Background: Use of highly active antiretroviral therapy for treatment of human immunodeficiency virus infection has been anecdotally associated with hepatotoxicity. Particularly in persons co-infected with hepatitis B and C virus.

Objective: To ascertain hepatotoxicity during highly active antiretroviral therapy treatment and the role of chronic viral hepatitis in its development.

Methods: Blood samples were collected from study participants. The samples were centrifuged to separate plasma for the determination of the activity of liver enzymes ALT and AST. The tests were done immediately by using computerized photometry (humstar 80) which is highly sophisticated and high quality machine. After chemistry test were done all samples were stored in deep freeze for hepatitis tests were performed. The testes were done by ELISA machine for both hepatitis B and hepatitis C virus. Baselines for ALT&AST were collected from secondary data of ART clinic and laboratory registration book of JUSH.

Results: From the total of 82 study population 14(17.1%) individuals’ liver enzymes level were increased highly in both ALT/AST by 2.9-3.5 times after treatments. Among study participants 18 were co-infected with one or both of hepatitis B or C virus. Further it was found that the prevalence of hepatitis B and C viruses were 12(14.6%) and 8(9.8%) respectively. And their liver enzymes also increased by 2.5-2.7 folds after therapy. Association between duration on HAART and level of liver enzymes were statistical significant (p=0.036).

Conclusion: This study indicates that the use of highly active antiretroviral therapy for long time increase the risk of hepatotoxicity. Hepatotoxicity is more common in persons with chronic viral hepatitis. Therefore, Liver status should be checked before
and after starting treatments. Drugs of abuse should be avoided in order to limit the effects of other factors than the drugs.

**ABSTRACT 70**

**ASSESSMENT OF BARRIER TO IMMUNIZATION SERVICES AMONG PASTORALISTS: THE CASE OF SHINILE ZONE, SOMALI REGION,**

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**Background:** The Expanded Program on Immunization started in Ethiopia in 1980 using different strategies. To increase the EPI coverage the Federal Ministry of Health put a new approach called Reach Every District. This approach helped a lot in most parts of the Regions in increasing the coverage. But the coverage remained still low, below 10%, among pastoralists, especially in Somali Region.

**Objective:** To assess factors that are critical for offering successful immunization services in Shinile Zone, Somali Region.

**Methods:** The study was a cross sectional survey of health providers supplemented by qualitative study. It was conducted in September 2007 in six woredas of Shinelle Zone, Somali Regional State. All health professionals working from the study area were included for the quantitative survey and eight FGD were conducted for the qualitative part. Two FGD from each of the following population group were conducted: Community and/or religious leaders; Mothers of vaccinated under 2 children; Mothers of non-vaccinated under 2 children; and health administrator and/or health providers and/or woreda council members.

**Results:** Most of the vaccine preventable diseases were known by the participants. Tetanus and Diphtheria were the least recognized. Schedules and type of immunization were not known by most of the study participants. Most of the participants had a negative attitude towards immunization, to mention some: “our fathers and mothers had not been immunized but they were healthy, so why we suffer and kill our time unnecessarily” and “there is a rumor that vaccines are deliberately prepared to
destroy our reproduction”. Only 25% of the health providers received training on EPI during the last one year. Most of the health facilities had shortage or absence of very important EPI materials and equipments. Among the factors listed for not taking children for immunization were: the mobile nature of the community; preferring traditional treatment; misconception about the cause of the diseases, not believing that vaccines prevent their children from getting sick; vaccination itself being the cause of disease transmission like HIV; lack of knowledge; distance; chronic shortage and high turnover of health providers; lack of resources; injection site abscess and fever.

**Recommendations:** Developing a new strategy that takes the mobile nature of the people into consideration such as arranging mobile EPI service using local transport; health care providers should properly educate the community about the importance of immunizations; and recruiting and providing training for local people.

**ABSTRACT 72**

**ASSESSING KNOWLEDGE, ATTITUDE AND PRACTICE (KAP) OF POST EXPOSURE PROPHYLAXIS FOR HIV/AIDS AMONG HEALTH CARE WORKERS IN ZEWDITU HOSPITAL, ADDIS ABABA**

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**Background:** HIV/AIDS is a major health problem affecting more than 40.3 million peoples all over the world. Its high prevalence in the community increases the occupational risk of HIV/AIDS infection at workplace. As Ethiopia is one of the sub-Saharan countries in which largely affected by HIV/AIDS, Post exposure prophylaxis (PEP) for occupationally exposed health care workers (HCWs) is much more important. PEP is a short term antiretroviral therapy to reduce the likelihood of HIV/AIDS infection after potential exposure. It has been associated with an 80% reduction in the risk of HIV/AIDS infection among HCWs exposed to HIV/AIDS on work.

**Objective:** To asses knowledge, attitude and practice (KAP) of Health Care Workers (HCWs) about post exposure prophylaxis (PEP) for HIV/AIDS among health care workers in Zewditu Hospital, Addis Ababa, Ethiopia.

**Methods:** A cross sectional study was carried out to determine knowledge, attitude and practice of post exposure prophylaxis (PEP) for HIV/AIDS. Data was collected
using structured questionnaire and the data analysis was made using scientific calculator.

**Results:** - A total of 221 HCWs were included in the study. About 97.8% of HCWs knew about occupational risk of HIV/AIDS, 85.97% of them knew about PEP for HIV/AIDS. Of these HCWs who knew about PEP, 55.6% of them knew the use of two drugs and 24.73% about use of three drugs for PEP. Most of the respondents have good attitude about occupational risk of HIV/AIDS, protectiveness of UP methods and PEP for HIV/AIDS. About 46.6% of HCWs have had exposed to occupational risks while at work. Of which, needle stick was the leading risk (76.69%) and nurses were the largest group at risk (51.68%). Of exposed HCWs, 23.3% of them exposed to seropositive source patient and 53.40% of them exposed to unknown source. Of these HCWs, 34.17% of them have taken PEP but 66.66% of them didn’t complete the regimen.

**Conclusion and Recommendations:** - Majority of the HCWs have knowledge and good attitude about occupational risk of HIV/AIDS, and protectiveness of PEP. Even if more than one third of the exposed respondents have taken PEP, unfortunately most of them did not complete the regimen. Consecutive ART training programs and participatory discussion should be given for HCWs to broaden their knowledge about occupational risks for HIV/AIDS.

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**BARRIERS AND FACILITATORS TO ANTIRETROVIRAL MEDICATION ADHERENCE AMONG HIV INFECTED PEDIATRIC PATIENTS IN ADDIS ABABA, ETHIOPIA: A QUALITATIVE STUDY**

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**Background:** The recent extensive use of combination antiretroviral therapy (ART) has substantially reduced morbidity and mortality resulting from AIDS, its therapeutic benefits is limited by people’s inabilities to closely adhere to complex regimens. Because medication adherence is a complex behavior with multiple determinants, to be effective, adherence interventions need to be comprehensive and address a broad range
of social and behavioral factors. Understanding the barriers and facilitators of adherence is inevitable for program improvement that can lay the groundwork for adherence intervention strategies. Hence, little is documented in Ethiopia context particularly in HIV infected children.

**Objective:** Assess the barriers and facilitators to antiretroviral medication adherence among HIV infected Pediatric patients in Addis Ababa, Ethiopia in 2008.

**Methods:** A qualitative study using Semi-structured discussion guide was used for the in depth interview. Six-selected adherent and six selected non-adherent cases of the children and 14 key informants including counselor and physicians found in five hospitals were included in the interview. Then, each session of in depth interview was recorded by taking a detailed notes and Audio tape recorded. The interview was transcribed verbatim. The data was analyzed manually.

**Results:** The finding reveled that over dosage (heavy pill burden), need of a separate place to be taken when some of family /neighbors came to their home for fear of stigma and discrimination, cost and access for transportation, lack of understanding on the benefit of taking of the medications, economic problems in the household, the children spit out of the medications, to busy in indulging in preparation of food, shifting from house to house (housing instability), nutritional problems at household level were the barriers of adherence to HAART. The facilitators for most of adherent pointed out that the presence of mobile /well alarm, the presence of health workers as neighbors and disclosure of the Sero-Status to the child.

**Conclusion:** Pediatrics adherence to antiretroviral therapy faced a huge challenge. This recalled provision of income generating scheme to the caregiver for assisting HIV infected children, health care providers should address proper usage of alarm and mass media for medication remainders. The health worker should stressed ART drug adherence, health education should be tailored in mass media to the community, principally reinforcing the PMTCT program is crucial component in pediatrics HIV infection prevention for early identification of exposed infant
ABSTRACT 78
PREDICTORS OF HIV ASSOCIATED WASTING SYNDROME IN CHILDREN RECEIVING ANTIRETROVIRAL THERAPY IN ADDIS ABABA, ETHIOPIA: FROM A MULTI CENTER CROSS SECTIONAL STUDY.

Sibhatu Biadgilign (Bsc, MPHE), Amare Deribew (MD, MPHE), Alemayehu Amberbir (Bsc, MPH, PhD candidate), Kebede Deribe (Bsc, MPH), Tefera Belachew (MD, Msc, DLSHTM)

Background: Weight loss and/or wasting were among the most frequently occurring AIDS-defining conditions in the era before the use of Highly Active Antiretroviral Therapy (HAART). Many of the nutritional problems that occurred among HIV-1–infected persons in the era prior to HAART, however, persist today. Weight loss and wasting remain common complications in individuals infected with HIV in the era of highly active antiretroviral therapy. Despite major advances in the treatment and survival of patients infected with human immunodeficiency virus (HIV), weight loss and wasting remain common problems. Little is reported in this regard in Ethiopia set up even in Africa.

Objectives: To determine the prevalence and predictors of HIV Associated Wasting Syndrome in Children in the era of Highly Active Antiretroviral Therapy in Addis Ababa Ethiopia, 2008.

Methods: A descriptive cross sectional study was conducted of 390 HIV-infected children from Pediatric Multi-center research hospitals in Addis Ababa, Ethiopia who were between 3 months and 14 years of age. Medical charts were reviewed to collect clinical, virological markers and anthropometric measurements of the children. Data was entered, coded, cleaned and analyzed using SPSS version 12.0.1 statistical packages.

Results: Most of the children 193(49.5%) were in stage III based of WHO classification. The mean and median CD4 count were 273.28 cells/mm3 and 203.00 cells/mm3 before ART. Around 260(66.7%) of the child had received nutritional support from the Hospitals. Most of the child 186(54.4%) started treatment 2 years ago. A total of 87% of the children were adherent based on the caregiver responses in one week recall period. The prevalence of HIV associated wasting syndrome was 351(90%) in this study. Using forward stepwise logistic regression analysis frequency
of clinical appointment with the doctor at exactly in a monthly base [AOR=2.63 (95% CI: 1.04, 6.65)], current CD4 count with 200-499 cells/mm3 [AOR=2.78 (95% CI: 1.22, 6.36)], not receiving nutritional support [AOR=4.58 (95% CI: 2.12, 9.90)], missing clinical appointment due to shortage of money for transport [AOR=5.27 (95% CI: 1.77, 15.65)], time to get to ART service with 31-45 minutes interval [AOR=3.43 (95% CI: 1.19, 9.87)] were predicted for not associated with HIV associated wasting syndrome.

Conclusion: The prevalence of HIV wasting syndrome was high in the study area. This remind decentralization of ART service to the near by health facilities, improving adherence to the regimen and encouraging the caregiver to contact the health care provider in monthly manner is recommended.

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UPTAKE OF CO-TRIMOXAZOLE'S PROPHYLAXIS IN HIV INFECTED CHILDREN RECEIVING HAART IN RESOURCE-LIMITED SETTING: THE EXPERIENCE IN ETHIOPIAN HIV-INFECTED CHILDREN

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Background: The majority of children with HIV infection live in low-income countries without access to antiretroviral drugs. The prevention and early treatment of opportunistic infections is the mainstay of their medical management. Co-trimoxazole is a widely available antibiotic that substantially reduces HIV-related morbidity and mortality in both adults and children. Prophylaxis with co-trimoxazole is a recommended intervention of proven benefit that could serve not only as an initial step towards improving pediatric care in young children with Limited access to antiretroviral treatment, but also as an important complement to antiretroviral therapy in resource limited settings. Despite co-trimoxazole’s known clinical benefit, there is paucity of studies in Ethiopia circumstance.


Methods: A total of 390 children on Highly Active Antiretroviral Therapy were enrolled in a descriptive cross sectional study conducted in ART clinic at five hospitals.
in Addis Ababa from February 18- April 28, 2008. Uptake defined as taking the prescribed co-trimoxazol and was estimated using self-report. Data entry and analysis were done using the SPSS 11.0 software package. Both bivariate and multivariate analyses were done to determine factors significantly associated with utilization.

**Results:** Reported uptake rate of co-trimoxazol prophylaxis was 94.4%. Majority of the children 129(38%) had TB and 53(18%) chronic lung disease. Around 253(65%) of the caregiver knew TB, Herpes Zoster 90(23.5%) and Pneumonia 12(3.5%) are some of the opportunistic infections they know. Most of the children 193(49.5%) were in stage III based on WHO classification. The mean and median CD4 count were 273.28 cells/mm³ and 203.00 cells/mm³ before ART. Most of the child 186(54.4%) started ARV treatment 2 years ago. After controlling for other determinant in the binary logistic regression, receiving co-trimoxazol medication with ARV at the same time during pharmacy visits [OR=0.002, 95%CI=0.001, 0.017] and difficulty of administration of ARV medications [OR=22.9, 95%CI=2.7, 194] were associated with not utilizing cotrimoxazol chemoprophylaxis.

**Conclusion:** Uptake for cotrimoxazol prophylaxis in children in this study is high. Sustained follow up on utilization cotrimoxazol for the management of opportunistic infection and co-administration of cotrimoxazol with ARV at different time gap is recommended in Ethiopian set up. Still, the issue of discontinuation should be well investigating with the cautious use in stabilized HAART.
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**ASSESSEMENT OF MAGNITUDE AND DETERMINANTS OF MATERNAL HEALTH CARE SERVICE UTILIZATION IN BECHO WOREDA, SOUTH WEST SHOA ZONE, OROMIA REGION, ETHIOPIA**

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**Background:** In Ethiopia maternal and infant mortality rate in 2005 were 673 per 100,000 and 77 per 1,000 live births respectively. One explanation for poor health outcomes among women and children is the nonuse of modern health care services by a sizable proportion of women.

**Objective:** The main objective of this study is to assess the status of the utilization of maternal health care services and factors that predict the utilization of the service at a district level.

**Methods:** A community based cross sectional study that employed both quantitative and qualitative methods was conducted in Becho woreda of South West Shoa Zone, Oromia region from March to April 2008. A two stage sampling technique (SRS and Cluster) was used to interview 603 mothers who delivered two years before the study period. Analysis was done using EPI info version 3.41 and SPSS version 13.

**Results:** Analysis revealed that maternal health care service utilization is 59.4 percent for ANC and 25 and 5 percent for institutional delivery and postnatal care service respectively. However, from those who attended ANC service slightly more than half of them 184 (51.3%) started ANC attendance after the first trimester of pregnancy and 154 (42.9%) had visited health institution for less than four times which is the minimum number of visit recommended by WHO. The majority of ANC attendants 292 (84.6%) had taken 2 doses of tetanus toxoid injection. Seven out of ten mothers who attended ANC had taken iron tablet to prevent anemia and only a handful of them 15 (4.2%) took tablets for intestinal parasitosis. Feeling healthy, work over load and lack of awareness are the major reasons mentioned for non attendance of ANC by 76.3, 13.3 and 6.5 percent of the respondents respectively. Univariate and multivariate analysis has shown that socio-demographic characteristics like residence, income, educational status and obstetrics characteristics like gravidity are highly associated with utilization of maternal health care services.
Conclusion and recommendations: Effective utilization of maternal health care services as recommended by WHO is very low in Becho district. Socio-demographic and obstetric characteristics predict utilization of the services. Promoting IEC in the community is recommended to improve the situation.

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SEROPREVALENCE OF MULTIPLE SEXUALLY TRANSMITTED INFECTIONS AMONG ANTENATAL CLINIC ATTENDEES IN GONDAR HEALTH CENTER, NORTHWEST ETHIOPIA

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Background: Sexually transmitted infections (STIs) are major health problems in developing countries where access to adequate diagnostic and treatment facilities are very limited. Ethiopia is amongst the countries where STIs are highly prevalent. However, information on seroprevalence of STIs among antenatal care (ANC) attendees is very scarce in the country.

Objective: To determine the seroprevalence of HIV, HBV, HCV and syphilitic infections and to assess sexual practice among ANC attendees.

Methods: Cross-sectional study was conducted involving pregnant women attending antenatal clinic at Gondar Health Center from August 01 to December 30, 2006. Data on socio-demographic characteristics and sexual behaviors were collected using structured questionnaire. Blood was collected and serum was tested for the presence of HBsAg, antibodies to HIV, HCV and Treponema pallidum.

Results: Among the 480 ANC attendees, the seroprevalences of HIV, HBV (HBVsAg), HCV and syphilis were 11.9%, 7.3%, 1.3% and 2.3%, respectively. Higher seroprevalence of HIV was observed in age groups of 20-29 (13%) and 30-39 (12.1%) years. ANC attendees from Gondar town had higher seropositivity rate (12.6%) than those who came from outside Gondar (9.4%). Serostatus of HIV was significantly correlated with knowledge of the ANC attendees on curability of HIV infection by treatment (OR, 95% CI: 0.40, 0.19-0.82, P=0.012) and transmission of HIV by blood and blood products (OR, 95% CI: 2.10, 1.21-3.68, P=0.009). Co-infection of HBV,
HCV and *Treponema pallidum* with HIV was observed but no statistical association was noted. **Conclusion:** The results indicate relatively declined prevalence of multiple STIs in Gondar, and call for the need to strengthen the exiting health education program & screening of all pregnant women for HIV, HBV, HCV infections and syphilis to prevent transmission of the infections in women, their children and the population at large.

**ABSTRACT 89**

**DIVERSITY OF CANDIDA SPECIES FROM HUMAN IMMUNODEFICIENCY VIRUS-INFECTED PATIENTS IN ETHIOPIA USING CHROMAGAR, TOBACCO AGAR AND PCR OF THE AMPLIFIED INTERNALLY TRANSCRIBED RRNA SPACER REGION**

Andargachew Mulu, Hiroshi Isogai, Erimias Diro, Henok Tekleselassie, Afework Kassu, Koichi Kimura, Emiko Isogai

**Background:** Oropharyngeal candidacies is the most common opportunistic infection in patients with HIV infection and is usually associated with *Candida albicans*. However, during the last 20 years a marked shift in the spectrum of *Candida* species has been noted among different immune compromised patients. Although CHROMagar Candida medium has been used for the isolation of *Candida*, identification of species is difficult due to the color of colonies on the medium. The purpose of this study was to identify *Candida* species from HIV infected patients in Ethiopia by combination of phenotypic and genotypic characteristics.

**Methods:** Oral rinses were obtained from 13 HIV positive patients with orpharyngeal candidness at Black Lion Hospital, Addis Ababa, Ethiopia and inoculated on CHROM agar plate and incubated at 37°C for 48 hours and examined. Colonies were then sub cultured on Tobacco agar, incubated at 30°C and observed daily up to 96 hours. DNA was extracted from 75 colonies and RRNA gene was amplified by PCR using species specific primers, and restriction fragment length polymorphism and sequence analyses were performed.

**Results:** Five different types of Candida species have been identified. The phenotypic characteristics of *Candida* on CHROM agar and Tobacco agar, together with the
amplification of intergenic spacer (ITS) region and restriction fragment length polymorphism (RFLP) profile helped to identify the fungi to species level.

Conclusion: The combination of these methods is useful for diagnosis and treatment of oropharyngeal candidacies and risk decision in patients with HIV infection.

Key words: Candida, human immunodeficiency virus infection, Ethiopia, RRNA spacer region, CHROMagar, Tobacco agar

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STRENGTHENING IMMUNIZATION PROGRAMS THROUGH INVolVEMENT OF GRADUATING HEALTH CARE PROFESSIONAL STUDENTS AND HEALTH EXTENSION WORKERS (HEWS)

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Background: EPI coverage remains low in many rural districts/kebeles of Ethiopia (population 5000) for many reasons, including mothers being uninformed and inadequately prepared Health Extension Workers (HEWs). Graduating health science students are in good position to address EPI gaps as part of their community-based team training program (TTP) and program-focused, skill-based trainings and supportive supervision for HEWs improve EPI coverage.

Objectives: Strengthen EPI program by improving capacity of: 1) graduating HCPs in social mobilization, advocacy and evidence based planning, and 2) HEWs related to immunization.

Methods/Strategies: In 2007 and 2008, 140 students participated from Gondar and Haramaya Universities: one group covering 1-3 kebeles per project site per year. Students did detailed needs assessments via household survey and focus group discussion (FGDs) with HEWs, then planned and implemented needs-based strategies. Two hundred ten non-participating students did limited assessment and planning, but
no interventions. Evaluation data were collected from students, managers, HEWs and community members.

**Achievements:** Students gained experience in data collection methods and management: one group surveyed 825 households. Interventions included community education and mobilization, and outreach for vaccination and defaulter tracing. One group gave 1550 vaccine doses to children and 845 TT doses; coverage improved to >75-85%, varying by antigens and sites. Refresher training was given to over 110 HEWs, and students collaborated with HEWs and public health staff in problem identification, planning and implementation. Managers reported improved performance by HEWs in project and other kebeles, and stronger links between teaching institutions and public health sector.

**Lessons & Recommendations:** This is an innovative collaborative model for strengthening HCPs’ skills, both EPI-related and general. Public health benefited from stronger links between levels, more skilled HEWs, availability of EPI promotional material and assessment tools, and actions to begin addressing identified problems. The universities contributed to public health by producing more skilled graduates, sharing expertise and adapting programs to needs. We recommend expanding the program to include all students and more health problems, with necessary modifications.
ETHIOPIAN PUBLIC HEALTH ASSOCIATION /EPHA/

PROCEEDINGS OF XIXth ANNUAL PUBLIC HEALTH CONFERENCE

“Renewing Commitment to Sanitation in the New Millennium: Aligning with International Year of Sanitation (IYS)”

HAWASSA
OCTOBER, 2008
Executive Summary

The Ethiopian Public Health Association held its XVIII annual conference from October 9-11 at the Sidama Cultural Hall in the presence of members, invited guests and dignitaries.

The president of EPHA Dr Mengistu Asnake gave an official welcome and a briefing about the public health association’s attainments and challenges, whilst Mr Glenn Andres, representative of the US Embassy in Ethiopia on invitation by the EPHA chairman, gave a keynote address in which he thanked EPHA for its primary health care promotion in Ethiopia and rendered a reassurance of US commitment to supporting the health sector in Ethiopia. The representative of the Ministry of Health Dr Hassen Mohammed on his part expressed gratitude to EPHA for its work in the advancement and expansion of primary healthcare in Ethiopia, while the representative of the regional health bureau Ato Zelalem Asrat gave an account health projects in SNNPR and wished the conference success in its deliberations.

The conference witnessed a number of reports and ensuing deliberations. Following the official opening, as per tradition EPHA presented awards in different categories: senior health service award and institutional award. Dr Damene Hailemariam and Dr Fikre Enkuselassie received the senior public service award and Prof Helmut Kloss and Prof. Dennis Carlson won the certificate of merit award. The institutional award went to the humanitarian activist Dr Abebech Goben.

Then came the plenary session on “Renewing commitment to sanitation in the new millennium” which was presented by Mrs Belinda Abraham of UNICEF, which was followed by a presentation by Dr Gail Davey on “Podoconiosis research and management”

There were a total of 32 poster presentations including one on sexually transmitted diseases among antenatal clinic attendees in Gondar Health Center. Another was on the importance of meteorological data in disease prevention endeavors at the national level. There were concurrent sessions on diverse topics including HIV-AIDS, health services and child health, environmental health, malaria/communicable disease and FP/RH.

The business meeting, which addressed the annual activity report, world health congress 2012, regionalization of chapters, and election of executive board members, concluded with a note that EPHA has been selected to host the 12th world health congress.

Finally came plenary sessions on “health sector development in SNNPR” and “Emerging noninfectious diseases in Ethiopia-cancer” which were able to generate enlightening debate and discussion.
ACRONYMS

EPHA: Ethiopian Public Health Association
SNNPR: Southern Nation Nationalities and Peoples Regions
USAID: United States Aid for International Development
MoH: Ministry of Health
HEP: Health Extension Program
IYS: International Year for Sanitation
UNICEF: United National International Children’s Fund
MDGs: Millenium Development Goals
BPR: Business Process Reengineering
HIV/AIDS: Human Immuno Deficiency Virus/Acquired Immunodeficiency Syndrome
STIs: Sexually Transmitted Infections
FP: Family Planning
RH: Reproductive Health
PHC: Primary Health Care
HC: Health Center
WHO: World Health Organization
NGO: Non-governmental Organization
MA: Master of Arts
ANC: Antenatal Care
ART: Antiretroviral Treatment
ECA: Ethiopian Cancer Association
i. Opening Ceremony

The opening ceremony was held at the Sidama Cultural Hall on October 23 at 8:30 a.m. Master of ceremony and Vice President of EPHA, Dr. Solomon Worku welcomed members and honorable guests. He then introduced details of the program to participants and invited Dr. Mengistu Asnake, President of EPHA, to officially welcome the conference participants.

During his welcome address, Dr. Mengistu briefed participants about the achievements and challenges of EPHA during the fiscal year. He thanked members of the association and the SNNPR Health Bureau for the active participation and support rendered to the association in discharging its professional responsibilities. He then called on Mr. Glenn Anders, Representative of the Embassy of the United States to give a keynote address.

In his address, Mr. Andres communicated the regrets of the American Ambassador for not being able to attend the conference due to an urgent official engagement. Mr. Andres congratulated and thanked EPHA for its efforts in promoting primary health care and other health related accomplishments in Ethiopia. He said that the American people and their government are committed through USAID and other agencies to helping Ethiopia. According to him, the USAID has been actively involved in public health programs with a budget of over $271.4 million. He noted that water, sanitation, and hygiene are important areas of US cooperation. He also expressed his appreciation for Ethiopia for joining over 40 countries worldwide in a challenge to have the largest number of school children who wash their hands with soap on Global Hand Washing Day. In closing, Mr. Andres, on behalf of the USAID, expressed his gratitude for the leadership of SNNPR as one of the leading regions that have improved sanitation through the Health Extension Program.

Representative of the Ministry of Health (MoH), Dr. Hassan Mohammed then took the stage on behalf of his ministry. Dr. Hassan briefly mentioned the achievements of the Health Extension Program (HEP) in the health sector and expressed gratitude to the EPHA and the SNNPR Health Bureau for organizing the 19th annual conference.

Representing the Regional State President and the region, Ato Zelalem Asrat made an opening speech in which he informed participants about the ongoing health projects in the
region. He wished the conference the same success the past conferences attained and promised, on behalf of the Regional State, to render the sought-after cooperation. (For more on the speeches made, see annex 1)

**ii. EPHA Awards Ceremony**

Following the official opening, as per the yearly tradition, Dr. Mengistu called on Mr. Andres to give the yearly award for the 2008 award candidates. Dr. Mengistu said the association had an exceptionally high number of candidates for the year’s (2008) different award categories.

He said that based on the recommendations from the Independent Awards Committee, EPHA’s Executive Board decided to award all the service and research candidates as selected by the Awards Committee and one of the organizations for institutional award. Two candidates were also recommended by the Award Committee and the Executive Board for the Certificate of Merit Award.

After thanking members of the independent Awards Committee for their tremendous professional assistance, Dr. Mengistu read the biography of the 3 candidates namely, Dr. Getachew Tadesse, Dr. Fisseha H/Meskel and Ato Amsalu Tekele, who were selected out of the total of 13 candidates for the Senior Public Health Service Award. Subsequently, Dr. Damen Hailemariam and Dr. Fikre Enkuselassie, were called to the stage to take the award of Senior Public Research. Representatives of Professor Dennis G. Carlson and Professor Helmut Koss took the certificate of merit award. Finally, Dr. Abebech Gobena, founder and owner of AGOHELD was called to receive the institutional award. (See annex 1, for more on the biographies of the individuals)

**iii. Plenary Session on “Renewing Commitment to Sanitation in the New Millennium”**

After the tea break, Dr. Mengistu invited Ato Tefera Gedamu, moderator of the plenary session and the panelists on “Renewing Commitment to Sanitation in the New Millennium: Aligning with the International Year of Sanitation (IYS)” to the stage.

The first presenter, Ms. Belinda Abraham from UNICEF, stressed that sanitation should be the major concern of public health as it affects 2.6 million people all over the world. She forwarded five key messages on the indispensability of sanitation as follows:
• Sanitation is vital [to health]
• It’s a good economic investment
• It leads to social development [Malaysia is cited a case in point]
• Sanitation helps environment
• Sanitation is achievable

In closing, Ms. Abraham hinted that even though Ethiopia has improved its sanitation coverage from 11% to 51%, Africa, as a whole, is still far behind the target.

Next, Ato Mulu Araya from MoH, made his presentation on sanitation in connection with the MDGs. Ato Mulu said that Ethiopia, when compared with other East African countries, is lagging behind. He also added that although the national sanitation coverage in Ethiopia is estimated to be 54%, it is basically characterized by traditional pit latrine. Moreover, Ato Mulu touched upon figures of the sanitation coverage at the regional levels. In conclusion, Ato Mulu said that the target for 2012 is 100% sanitation coverage.

After the two presentations, the moderator invited the house to ask questions. The first question from the house was about the reliability of the statistics concerning the sanitation coverage in SNNPR which was put at 90%. In reply to Ato Mulu said that even though the figures are collected from the health bureaus of the respective regions, they rarely exhibit inconsistency and that the MoH hopes to get the accurate data with the release of the results of the national population census.

The second question concerning the achievability of the target for the national sanitation coverage from 54% to 100% was again addressed by Ato Mulu who said that although the MoH has been overambitious with its target, with the appropriate utilization and increase in the number of health extension works and volunteers, it is possible to achieve 100% sanitation coverage.

It was also suggested that preaching is not the best tool in order to overcome the issue of sanitation, for the motto has been heard for the past 4 decades. Thus, a social vaccine, i.e. social behavioral change is needed. Concerning this, Ms. Abraham stressed that social awareness and behavioral change is, without doubt, the best mechanism along with the endeavors of the concerned official bodies to address issues of sanitation. She also reflected on the comment that the motto for this year is different from the previous ones as it is now
being underlined that the issue of sanitation is everyone’s business and that it is not only the question of health but of economic development as well.

Inadequate implementation of the public health policy by the MoH and insufficient involvement of health bureaus in encouraging private businesses/sectors to integrate themselves into the sanitation programs in the form of investment was also raised by the house.

In response to the questions and comments, Ato Mulu said that the MoH is responsible to stand in advocacy of but not to implement the public health policy. In fact, according to him, policy implementation is the responsibility of other agencies. He said that under the Business Process Reengineering (BPR) new regulatory agencies are expected to assume this role in an organized manner.

Afterwards, Ato Alemayehu Haddis from Jimma University spoke on the status of the training of Environmental Health professionals in Ethiopia. In his presentation entitled, “Enhancing Environment Health Training in Ethiopia”, Ato Alemayehu briefed participants that Ethiopia has been a pioneer with 50 years of history in environmental health service training.

In connection with the current status of environmental health training, he discussed the challenges of the training such as, lack of a focused curriculum, poor follow-up by MoH and integration of the program with the service sector.

Questions were asked after Ato Alemayehu’s presentation concerning the responsible bodies to design a well-focused curriculum and the employment opportunity for the trained environmental health workers. Comment was aired that with the increasing number of the health extension workers it would have been possible to attain a remarkable improvement in the environmental health service.

Ato Alemayehu responded to the questions and comments stating that it is the task of both the training institutions and the service sector to design a focused curriculum. He went on explaining that even though the expertise of the health extension workers is vital particularly in the rural parts of the country, they are not expected to address issues of urban sanitation problems and pollution. As regards job opportunities for trained environmental health workers, he said that the duty of the universities (the training institutions) is to train but not to facilitate job opportunities.
W/ro Kiros W/giorgis, the last presenter for the morning session took the stage representing SOS. The focus of the presentation was the prevalence of environmental damage due to plastic bags all over the country, particularly in major cities such as Harrar and Addis Ababa. She explained that SOS has been doing advocacy work even in countries as far as Australia, UK and Japan, having the mission of eradicating plastic bags as they have become one of the root causes of environmental degradation.

W/ro Kiros also stated that SOS has been giving the opportunity for vulnerable women to engage themselves in replacing these plastic bags with handmade cotton bags after having been given the necessary training. She called for the attention of every responsible citizen in lending a hand to eradicate the polluting plastic bags once and for all, upon closing her speech.

Questions were forwarded from the house whether the endorsement of the law which bans the import and circulation of plastic bags has materialized. She replied that even though the Customs Authority does not allow the import of plastic bags, they are produced locally. She added, “but whatever the case is, we should do something to eradicate them and struggle for the implementation of Proclamation 513”.

At the end of the session, Dr. Mengistu requested the presenters to provide key recommendations regarding observed weaknesses of EPHA. Upon this request, Ms. Abraham suggested that EPHA should focus on behavioral change and involve more actors in a holistic approach to sanitation as core to public health. Similarly, Ato Getachew proposed that EPHA should take the initiative to establish an Environmental Health Professional Association. He also underscored that MoH’s policies and guidelines should originate with the participation of concerned professionals in the health sector.

In closing, Ato Getachew commented that local universities should be given the chance for testing those technologies imported into the country in the form of donation.

(For more, see the three presentations on annex 3).

The discussions ended with the above recommendations given by the panelists and the morning secession adjourned at 1 p.m.
Afternoon Session

iv. Presentation on “Podoconiosis: Research and Management”

The afternoon session took place at the Hawassa Regional Management Institute Hall. The session’s moderator Dr. Gail Davey and panelists, Ato Meskel Ashine; Mathewos Hilla (Patient-expert), Ato Henock Legesse, and Pastor Zewdu Zeleke took the stage.

The discussion on “Podoconiosis” was based on practical experience. Dr. Davey showed a film on “Mossy foot”. The film depicted the life of mossy foot patients and the contribution of the “Mossy foot Project” along with the contribution of former patients as community agents after they are cured. She then briefly spoke on how people have been affected by the disease and how the patients have been left as outcasts in their communities.

Dr. Davey then invited Ato Meskel and Mathewos to inform participants about the status and effects of the disease. They drew the attention of the conference participants to the severity and prevalence of the disease particularly in Wolayita zone. The discussion took the form of interview. Based on his personal experience, Mathewos, a former patient and an expert, addressed the questions concerning the nature of the disease, the problems such as social stigma and discrimination he had faced, the sort of treatment that he had received and others.

He explained that he caught the disease while he was about 13 years old adding the disease got severe after 3 days. Mathewos said that it took him about a total of 3 months to get cured following medication. He said that he had been given medicines and a pair of shoes designed for mossy foot patients. He was also given the necessary training for making shoes for mossy foot patients. He now leads his life by making shoes and working as a counselor for mossy foot patients.

On the limitations of the Mossy Foot Project, Mathewos said that the size of the shoes is at times too big for the patients. He also stressed that the project should work on the supply of pure water as one of the causes of the disease is lack of proper sanitation and hygiene due to the unavailability of water in the area. Mathewos concluded his speech with a note that, even though around 152,000 people are believed to be mossy foot patients in Wolayita zone, the disease is not contagious.
At the end of the interview, Ato Meskel pointed out that if the number of mossy foot patients is this much in Wolaiyta zone alone, it would be difficult to imagine the number in the rest of the country.

Dr. Davey also underlined that red clay soil, high seasonal rainfall, high altitude and low income (barefooted subsistence farmer) cause vulnerabilities to the disease. She also told participants that 1 million patients of mossy foot are believed to be living in Ethiopia.

A research paper on “Discrimination and Stigma Associated with Podoconiosis” was presented. It was stated that although the prevalence among men and women is the same, women’s access to information is particularly low. The study also showed that there is considerable misconception about the disease and absence of shoes in the market for the patients.

Next, a study paper on “Assessing Life Quality of Patients with Podoconiosis in Southern Ethiopia” was presented by Henok Legesse. Henok said that based on a research, 74 new and 73 treated patients were approached and the result showed that the life quality of those treated at least for 3 months is better than those untreated. He also informed participants that the program compliments clinical staging as an assessment tool and it was found out that self-consciousness affects all patients.

At the end of the presentations, questions were raised from the house. Questions concerning the involvement of other health sectors; the magnitude of the problem in the area; the difference between Filariasis and Podoconiosis; and, the cost of the shoes for the mossy foot patients were raised during the first round question-answer session.

In reply to the questions, Ato Meskel said that for the past ten years, the involvement of the government-owned health institutions was low due to different reasons, such as lack of awareness regarding the disease. He underscored the magnitude of the problem focusing on the number of patients who are suffering both physically and emotionally due to stigma and discrimination within the community. Concerning the intensity of the problem, Pastor Zewdu Zeleke added that the mossy foot patients are not even welcome in Churches and due to similar pressures abandon their schooling and their social events, including marriage. It was also said that the Podoconiosis is different from Filariasis. Regarding the cost of shoes, Ato Meskele said that with the expertise of 72 trained individuals, the shoes are made under the Mossy Foot Project.
Ato Meskel also took up the question regarding the involvement of the community in the prevention of the disease and ending of stigma and said that people in the community are involved particularly through the “Community Networking” program and that patients are invited in such programs to share their experiences. Subsequently, in response to the question asked about the effectiveness of the project in getting publicity, he said they were endeavouring to get national recognition in proportion to the magnitude of the medical condition which is shattering youthful lives. Finally, the house recommended that the program should be integrated with other health activities to produce a strong effect and to have a country-wide expansion of the service.
(For more, see the presentations on annex 4)

v. Poster Presentation and Exhibition

After the tea break, 32 posters were exhibited to conference participants in a poster presentation and exhibition session. Posters that depicted the background and nature of sexually transmitted infections among antenatal clinic attendees in Gondar Health Center, northwest Ethiopia, and the importance of integrating weather forecasting to prevent and control communicable diseases, such as malaria, were two among the other posters presented. Participants observed details of the posters and exhibitions through questions and answers with the presenters.
The meeting adjourned at 5 p.m.
Friday, October 24th, 2008

vi. Concurrent Sessions

The morning was arranged for concurrent sessions. Participants were divided into groups and were led to the different rooms prepared for the sessions. Topics for the concurrent sessions were:

- HIV/AIDS/STIs
- Health Service and Child Health
- Environmental Health
- Malaria/Communicable Disease
- FP/RH
a. HIV/AIDS/STIs

In this particular concurrent session eight papers were presented as moderated by Dr. Mengistu Asknake.

Ambaye Degefu, from EHNR, presented a paper entitled, “Assessment of Dietary Intakes and Essential Nutrients and Nutritional Status of PLWA in Yeka, Lideta, and Akaki Sub-cities of Addis Ababa.” Yibeltal Kifle, from Jimma University, also presented a paper titled “Quality of HIV/AIDS Clinical Care in Felege Hiwot Referral Hospital: Availability of Resource alone will not ensure quality”.

Similarly, Binaym Taye and Hirut G/Tsadik presented papers on “Impact of Malnutrition in Survival of HIV Infected Children after Initiation of ART” and “Evaluation of Monitoring System of Care and Support Program for OVC in A.A. HAPCO, A.A.” respectively.

Subsequently, the last four papers under the titles “High Risk Behaviors and Associated Factors Among HIV-Positive Individuals in Clinical Care in South West Ethiopia”, “ART Adherence and its Determinants Among PLWHA on HAART at Two Hospitals in Oromia Regions”, “Immune Restoration Disease After The Treatment of HIV-Infected Patients with HAART in A.A. Ethiopia.”, and “Disclosure of HIV/AIDS Diagnosis of HIV Infected Children In Addis Ababa”, respectively were presented by Kebede Deribie, Miftah Awol, Kahsay Huruy and Sibhatu Biyadgilign respectively.

At the end of each presentation, participants were encouraged to air views and different questions and reflections were entertained by the presenters.

b. Health Service and Child Health

Ato Tiruneh Sinnshaw moderated the session. Five papers were presented on the topic: Health Service and Child Health. Fekadu Nigussie presented his paper on “Evaluation of Immunization Data Quality”, followed by Biruk Tensou’s two presentations on “Using Rural Surveillance as a Substitute of Viral Registration” and “Pattern of Care at the Terminal Illness”. Tesfahun and Abiy Seifu also presented their papers on “Cause of Antiretroviral Drug Changes” and “Impact of Household Food and Nutrition Security.”

Participants reflected their concerns after each presentation.
c. Environmental Health

Ato Muchie Kidanu moderated the session in which six papers were presented on issues related to Environmental Health. Berhanu Getenet presented his paper on “Constructed Wetland System for Domestic Water Treatment and Care Study in A.A.” After the presentation a discussion on the improvement of water quality and values for Wetlands followed.

Next, Worku Tefera presented his study on “Technical Issues of Sanitation and Health In Mirab Abaya and Alaba”. Following his presentation, Aman Jemal discussed the possibility and effectiveness of softening hard water using seeds of tree and cabbage, in his paper entitled, “Softening of Hard Water Using Seeds of Cabbage Tree”. In his presentation, he stated that this technique is less costly but effective in that seeds have the nutritional value and potential to remove hardness.

The fourth paper was on “Socioeconomic and Demographic Descriptors of Solid Waste” by Mesfin Tesfay. Mesfin discussed the impact and dependency of solid waste particularly on the economy. Likewise, Hailu Dinku presented his study on “Generation and Management of Practice of health Care Waste and General Hospitals of A.A. City” He mentioned the variation of ratio between general waste versus hazardous waste in hospital and lack of knowledge regarding the amount of waste generated on the hospitals’ side.

Finally, Alemayehu Haddis discussed the development of five modules on solid water management and other related issues in his paper “Innovative Ways of Integrated Training and Researching in Environmental Health”.

Participants suggested that studies should contribute to present evidence-based information for advocacy and duly noted the importance of applying research findings for the provision of doable solutions.

d. Malaria/Communicable Disease

The concurrent session was moderated by Dr. Tesfaye Bulto. In this session, seven papers were presented basically on the areas of prevalence, current status and prediction of communicable diseases such as malaria. It was noted that there has been a very important progress shown after the control intervention on communicable diseases. Participants also
expressed their reservations on the short time given for discussion. Thus, they requested EPHA to think about the time allocation for such important concurrent sessions.

e. FP/RH

Mesganaw Fantahun moderated the concurrent session on FP/RH. Dr. Amanuel Gessessew was the first presenter of the session. He presented his study on “Prevention of Postpartum Haemorrhage: Options for Home Births”. In his presentation, Dr. Amanuel discussed Haemorrhage as the most common cause for maternal mortality. He also said that 50% of the maternal deaths occur in the first 24 hours after delivery. Further, he highlighted that 90-94% of the births in Ethiopia take place at home.

Ato Tadesse Alemu presented the next paper on “Fertility Regulation Methods among Remote Ethiopian Communities: The Case of Hamer Woreda, Southern Ethiopia”. He reflected that there is little knowledge about fertility regulation method among the remote Ethiopian communities. He further discussed that access to modern contraceptives is poor and many people want to have as many children as possible.

Finally, Ato Fikru Tessema highlighted the importance of school-based programs to improve adolescents’ knowledge of RH issues and that about 84% adolescents were reached through RH related information and education, in his paper entitled, “Process Evaluation of School-based Adolescent RH Education Programs in Schools: The Case of Hawassa City.

At the end of each session participants reflected on the issues presented and discussions on each topics took place.

Afternoon Session

vii. Plenary Session on “The Assessment of Primary Health Care Thirty Years after Alma Ata Declaration”

The afternoon session began with the assessment of Primary Health Care whose realization came into existence with the Alma Ata Declaration 30 years ago. Dr. Fatouma Nafo Traore, the moderator of the session introduced the objective of assessing PHC saying that although it has been 30 years since the program was launched, it hasn’t been as fully implemented as it was intended to be. She also expressed her regrets that focusing on some diseases did not help to make the program successful and achieve the MDGs.
Dr. Teferra Wonde, the first panelist, presented the historical framework that the PHC has gone through. Dr. Teferra highlighted that PHC includes vaccination, diagnosis, treatment, health education, nutrition, proper sanitation and water as its components.

After the Alma Ata Declaration, Dr. Teferra said that Jimma Health Science Institute was established and Gondar Public Health College was reorganized and began admitting medical students. Other achievements, such as the increase in the number of hospitals and health workers, have also been recorded during the period of 30 years. Having briefed participants about the successes of the program, he stated the challenges as shortage of budget and per capita expenditure, high turnover and attrition of health workers, and underutilization of health services.

As a way forward, Dr Teferra underlined the need for strengthening the regulation of private health service provision and the health system along with utilization of the Health Extension Program in urban areas.

Subsequently, Dr. Hassen made a presentation on the expansion of health centers throughout the country. He stated that primary health care is highly dependent particularly on social factors and the number of health care workers. Dr. Hassen discussed principles and achievements of HEP in which a remarkable number of health workers are trained and deployed with the aim of addressing health issues 100% by the end of 2008.

Following Dr. Hassen’s brief presentation, Dr. Assaye presented the chronology of child care beginning with the breakthrough in the fight against the Cholera epidemic in 1960 in Bangladesh. He also highlighted what he termed as the first and second revolutions for child survival in 1980 and 2005. There had been 5 major diseases which have been identified as killers and whose mortality rate can be reduced by 60% by strengthening HEP and HC staffs. He argued that HEP needs to adopt a paradigm shift in health service provision empowering caretakers, family units and communities to take care of their own health so as to scale-up child survival intervention and achieve the MDG 4.

Poor infrastructure, inadequate resource mobilization, lack of adequate resource and absence of strong country-level partnership were said to be challenges of the program. Finally, Dr. Assaye recommended that the approach should be a continuum of care, i.e. care starting from
home and then to health center and hospital levels – a continuum that begins from conception to pregnancy, infancy and childhood.

Lastly, Dr. Ermias pointed out in his presentation that in Africa, deaths which result from childbirth complications are high. He said that such deaths are preventable and the intervention affordable. According to Dr. Ermias, by improving maternal health intervention, it is possible to reduce the alarming mortality rate. As a way forward, he recommended that sector wide investment to strengthen the health system and promoting integrated maternal health are pivotal.

Then after, the floor was opened for discussion based on the points forwarded by the panelists. It was suggested that the skills and expertise of volunteer health workers should not be undermined and overlooked to curb health related problems in the country. Moreover, it was said that behavioral change should be part of any health package.

Among the questions asked, the contribution of emergency obstetrical care, and the reason why the international community, such as WHO and UNICEF have diverted their attention from strengthening healthcare packages were the first two. Addressing the first question, Dr. Ermias said that there has been a good initiative to train midwives so as to equip them with the necessary knowledge and skill to engage in the obstetric care. Concerning the second question, Dr. Assaye reminded participants that donors cannot do the job alone and that everybody is responsible for public health issues.

(See annex 5, for more on the presentations)

The meeting adjourned at 5:30 p.m.

viii. Business Meeting

Agenda:

a. Annual Activity Report  
b. World Health Congress 2012  
c. Regionalization of Chapters  
d. Executive Board Members Election

Upon opening the business meeting, Dr. Mengistu encouraged members to give their unreserved inputs and requested the house to endorse the agenda. Following the endorsement of the meeting agenda by the house, Dr. Mengistu congratulated members that EPHA has been selected to host the 13th World Health Congress 2012. He also informed participants that the Representative of the USAID has promised to assist EPHA in every
possible way. He also said that Mrs. Susan, who is a public health professional and who is currently in Ethiopia, has volunteered to render a professional assistance to the association.

A. Annual Activity Report

The activity report was presented by Dr. Solomon, V/President of EPHA. He briefly touched upon the activities which have been undertaken throughout the year. Capacity building, information dissemination, training, networking activities to establish partnership both locally and internationally, RH/FP-health extension program in collaboration with partner organizations were some of the activities performed during the fiscal year.

He presented the issue of office premises, lack of transportation facility, low budget utilization by partners as some of the challenges that EPHA faced. (See annex 6)

B. Chapter Activity Reports

Following Dr. Solomon’s presentation, representatives of the different EPHA chapters were called to the stage to present their annual activity report.

1. Haramaya Chapter

Ato Nega Baraki, representative of the Haramaya Chapter stated that the Chapter has had sufficient communication with the Head Office and that it has been attracting new members composed of students and academic staff. Regarding challenges faced by the Chapter, Ato Nega said that even though the Chapter has been given office by Haramaya University, it was not possible to assume the office due to lack of office furniture. He also expressed complaints on behalf of members of the Chapter concerning delays in receiving publications from the Head Office.

2. Tigray Chapter

Ato Araya Abrha said a few things on behalf of Dr. Amanuel Gessese, the focal person of the Chapter. He reported that the Chapter has 120 active members. Mekelle University in collaboration with the Tigray Health Bureau has decided that the Chapter should be given an office premise in Mekelle University. He also said that even though the chapter has budget limitations to discharge its responsibilities, the increase in the number of public health
professionals is promising. In closing, he requested the house to give the chance for Tigray Chapter to host the 21st annual conference and the request was applauded.

3. Bale Chapter

It was said that the chapter has 80 members, mostly comprising students from private health colleges. The Chapter has been performing its duties in promoting and attracting new members along with timely collection of membership fees; however, due to lack of formal receipt, absence of proper office and shortage of running cost of the work, the presenter said that the Chapter is facing problems.

4. Bahir Dar Chapter

Representative of the Chapter said that the Chapter is not properly organized as it has just been reestablished by 3 individuals and there has not actually been formal handing and taking over from those who previously took the responsibility of running the Chapter.

5. North Wollo Chapter

The focal person, Ato Kebede Kassa briefly discussed the financial status of the Chapter. The number of members is growing as a result of the opening of RH/FP project in the area. Office facilities including telephone and postage costs, inadequacy of budget and delay in distributing publications to members are said to be challenges faced by the Chapter.

6. Gondar University Chapter

The focal person, Ato Amsalu Feleke expressed his gratitude to EPHA and CPHA for their continuous support. He reported that the Chapter has been collecting dues from members and transferring them to the Head Office as part of its activities. He also highlighted that the University has given the Chapter an office and office materials have been provided by EPHA. However, shortage of running costs particularly during this year, high staff turnover and delay in receiving journals have been identified as problems of the Chapter.
7. SNNPR Chapter

The focal person briefed participants that the Chapter is working tirelessly to attract new members and retain old ones. He stated that the Chapter has played a great role in organizing the 19th annual conference. He also mentioned that although the chapter is at present using the office provided to it by the Health Science College, the facility is inconvenient to perform its duties.

C. Audit Report

Following the Chapters’ presentations, Ato Million Benti, a delegate from Awoke Gebreselassie and Co. Certified Public Auditors, reported the audit results. He informed participants about the validity and authenticity of the audit process. He introduced CDC, Packard Foundation and others as the major donors of EPHA’s programs. Ato Million reported the breakdown of expenditures and stated that it indicates an increase due to the purchase of a vehicle for office works. (See annex 7)

Next, the floor was opened for questions and comments/suggestions. One of the participants said that regardless of EPHA’s attempt to post any relevant information on it’s website, it was regrettable that the website has been neglected and that there were no updates even to notify members about the conference. In the same manner, participants requested both the Head Office and Chapters to come-up with a consolidated report which includes future plans. In line with this, another member said that the audit report should have incorporated strong recommendations and requested an explanation. Besides, it was suggested that beneficiaries of EPHA should be clearly identified.

Concerning the recommendations of the audit report, Ato Million said that if there are no findings, there would be no recommendations.

Similarly, questions concerning the impact of the new NGO policy on EPHA; the procedures and criteria for choosing the audit firm; the effort EPHA has been exerting to involve members in research; the whereabouts of the EPHA Advisory Council; and the status of EPHA’s Memorandum of Association were forwarded.

Dr. Mengistu addressed the question on the impact of the new NGO policy saying that there has been an attempt to discuss the matter with the concerned government bodies. He also
explained that EPHA chooses audit firms through competition and stressed the donor organizations’ consent as mandatory. Regarding the involvement of members in research activities, Dr. Solomon responded that EPHA has been putting its maximum effort to engage members in such endeavours. According to him, EPHA has, in fact, been supporting MA Theses of members from different universities.

Finally, Dr. Mengistu closed the meeting after replying to the last two questions saying that the Advisory committee would be called upon soon to regionalize the Chapters and to discuss matters concerning the 13th World Health Congress 2012 and informing participants that the Memorandum of Association has been renewed to serve for the next three years.

**D. Election of Executive Board Members**

Dr. Getachew Teka, Ato Tiruneh Sinshaw, and Dr. Tesfaye Bulto were elected to chair the election of the Executive Board Members. Before the nomination, Dr. Solomon, the V/President of the Board and Sister Tekebash, the internal auditor, who served for two years, were requested to continue assuming their positions whereupon they expressed their consent to serve for another two years. Dr. Mengistu, on behalf of EPHA, thanked Dr. Misganaw Fantahun and Dr. Abeba Bekele who have finished their terms, after serving the association for two rounds (4 years). Following the count of votes Dr Wakgari and Dr Zewditu who received 56 and 49 votes respectively were elected to assume membership of the exutive board of the EPHA.

**ix. Plenary Session on “Health Sector Development in SNNPR”**

Dr. Estifanos Biru, former Head of the Regional Health Bureau of SNNPR moderated the plenary session on “Health Sector Development in SNNPR”. The historical framework of the health sector development in the region was presented by Ato Kare Chewicha, Head of the Regional Health Bureau. Ato Kare stated the background, strategy, achievements and challenges of the health sector in the region.

He said that the number of health institutions and health facilities have been raised along with the training institutes. The number of projects undertaken by NGOs has reached 142. Furthermore, Ato Kare highlighted that facility expansion from health post (HP) to health care center (HC), decrease in the prevalence of HIV, access to HIV services including ART, HCT, ANC, and latrine coverage has increased. In stating the challenges faced, he explained
that in spite of the expansion of health facilities, there is low utilization of health services, high turnover and shortage of skilled health manpower and weak institutional support to HEP.

Accelerating expansion and equipping health facilities together with reducing the maternal mortality rate were discussed as a way forward. In wrapping up, Ato Kare forwarded his heartfelt gratitude for those who participate in the health sector development on behalf of the SNNPR Regional Health Bureau.

The moderator opened the floor for questions, comments and suggestions. In reply to the question asked about the reasons for the decrease in HIV prevalence rate, Ato Gizachew Kebede, the Deputy Head of the Regional Health Bureau, said that the region has been able to achieve the reduction in the prevalence through HSEP and community awareness programs by questioning and addressing harmful traditional practices, such as female genital mutilation. W/ro Amarech Agedew, Deputy for HIV Section in the Regional Health Bureau, added that HIV/AIDS prevention and control has been mainstreamed at all levels be they governmental or non-governmental offices in the region.

In addition, questions were forwarded relating to the support that EPHA has rendered to the region so far; and Ato Kare replied that the region has been benefiting from EPHA’s support, which mostly comes in the form of professional assistance particularly in the research dimension.

(See annex 8, for more on the presentations)

Participants of the conference were finally invited to see the results of the breakthrough on malaria on the MoH website. The session wrapped-up at that point.

x. Plenary Session on “Emerging Non-Infectious Disease – Ethiopian Cancer”

The last Plenary Session was on “Emerging Non-infectious Disease-Ethiopian Cancer”. The panalist, Ato Teshome Deressa, threw light on the status of cancer in Ethiopia and the problems which are related to policy and facility, lack of trained professionals, the expensive nature of the Chemo-hormone therapy and low interventions on cancer.
He reflected that the Ethiopian Cancer Association (ECA) was established in December 2002 by cancer professionals with the objective of increasing people’s awareness, access to early detection and creating conducive policy environments for prevention, early detection, treatment and care of cancer.

Ato Teshome said, “Cancer is a major public health issue which has not been given due attention.” In discussing the achievements of his organization, he pointed out that 30,000 individuals were addressed through face to face awareness education and mini-media have been put to use. Also one national and advocacy network has been established. However, he said that despite the support it received from a certain organization, namely Astra Zeneca, for the last couple of years, ECA has been faced with inadequate funding, lack of cancer data and high expectation of the cancer patients.

Establishment of a cancer home, research on cancer and multimedia awareness creation programs, and the importance of high level advocacy were put forth as a way forward.

A participant expressed sympathy towards patients dying while waiting for their turns to get the cancer treatment at the Black Lion Hospital and asked whether or not the ECA has been in communication with MoH on the issue of cancer. Similarly, another participant asked how many NGOs were working on cancer prevention and treatment. Ato Teshome replied that there are only 3 organizations working in the area of cancer and that these NGOs are not very organized. Ato Teshome mentioned a good positive working relationship with the NGOs and plans to further ties. Concerning the question asked about the causes of cancer in Ethiopia, he said that research is needed to identify the exact causes, adding there surely are risk factors and the causes which apply for other parts of the world also apply for Ethiopia.

It was suggested that research should be initiated to address the issue of cancer in Ethiopia and EPHA should communicate the state of such deadly diseases as cancer and Podoconiosis to the MoH.

Participants were invited for site-visits and the meeting adjourned at 12:45, noon.
Annex 1. Speeches made during the Opening of the Conference

Opening Address by Dr. Mengistu Asnake, President of EPHA

- Dear Ato Zelealem Asrat representative of the President of the SNNPR State Government
- Dear Mr. Andres, Director of USAID mission to Ethiopia representing the Ambassador of the United States of America in Ethiopia
- Dear Dr. Hassen Mohammed, Head of the Health Service Department of the FMOH representing the Minister of Health.
- Distinguished representatives of local and international organizations and Guests,
- honorable members of the Ethiopian public Health Association,
- Ladies and Gentlemen,

It gives me the greatest honor and pleasure to welcome you to the 19th Annual Conference of the Ethiopian Public Health Association. I am very pleased to note that the 19th annual conference is being held in the beautiful city of Hawassa, the regional capital for the SNNPR and during a unique time when our country already started the first year of the 3rd Ethiopian millennium with a motto of “renaissance”

The theme of this year’s conference is “Renewing commitment to sanitation in the new millennium: Aligning with the International Year of Sanitation.” During one of our panels in the 18th annual conference last year on “Environmental Hygiene in the Health Care Settings”, there was a great interest on the issue of sanitation by the participants of the conference in which the executive board of EPHA was obliged to base its decision in choosing this year’s theme. This was also supported by a global decision to put the spotlight on sanitation, where the UN General Assembly declared the year 2008 as the International Year of Sanitation (IYS).

As you are aware, around the world, 2.6 billion people do not have a clean and safe place to use for performing their bodily functions they lack that basic necessity, a toilet. This hidden global scandal constitutes an affront to human dignity on a massive scale. The goal of the IYS is to raise awareness and to accelerate progress towards the Millennium Development Goal (MDG) target to reduce by half the proportion of the 2.6 billion people without access to basic sanitation by 2015. Sanitation is vital for human health where no one in this gathering or outside can argue. It also generates economic benefits as evidence from the improved sanitation in developing countries which yields about USD 9 worth of benefits for every USD 1 spent. Sanitation also contributes to dignity and social development and protects the environment. Above all the one inspiring truth that should bring all of us a strong force is
that “Universal sanitation is achievable”. This is evidenced from experiences in SNNP and Tigrai regions through the implementation of the health extension program. As part of the 10th Annual Review Meeting of the Health Sector Development Program, I had an opportunity to visit a community in Tigrai region demonstrating universal sanitation which can easily prove the inspiring truth.

At this conference, we will have the opportunity to hear from a number of distinguished experts working in the field, present and discuss their first hand experiences in the main theme of the conference and outline the way forward.

In addition to the main theme, the conference will have a number of panel discussion on major public health problems that include:

- “Podoconiosis: Research and Management”, a neglected major public health problem linked to sanitation and usually confused with lymphatic filariasis and commonly named as elephantiasis and affecting millions of rural population.
- “Health Sector Development Program in the SNNPR”, highlighting the major achievements, driving force, challenges and the way forward in the health sector in the region.
- “Primary Health Care: Thirty years after the Alma Ata declaration” highlighting the progress and lessons learned.
- “Emerging Non-Infectious Disease in Ethiopia: The case of Cancer”, highlighting the magnitude of the problem and current efforts.
- “ART scaling up and addressing the challenge in Ethiopia”, highlighting the progress, challenges and the way forward.

In all the sub-thematic areas, experts in the field will present and share their experiences from program implementation and research findings.

I am pleased to inform you that, all the sub-themes mentioned above were selected through a wider consultation of members, the host region and based on the evaluation of the 18th annual conference.

Excellency, Ladies and Gentlemen,

As you are aware, generation and dissemination of strategic information remains a solid basis for our Association. The most important part here is availing the strategic information in order to put it into practice. As a mechanism of creating an opportunity to disseminate and use existing knowledge from different researches and program documentations, this year 74 papers (37 oral and 37 posters) in addition to the panel discussion in the thematic areas will be presented in parallel sessions. This year various public health topics are part of the parallel
sessions that include: HIV/AIDS, Health Services, Environmental Health, FP/RH, Malaria, Drugs, Maternal Health, EPI, Training, Infectious disease and Mental Health. Building on the positive experience of last year, specific time is allotted for poster presentations which will give more opportunity for all participants in getting more time to interact with each other and the individual presenters. In addition, EPHA’s projects’ experience particularly, RH/FP Repositioning through HEP strengthening supported by the David and Lucile Packard Foundation and piloted in North and South Wello zones of the Amhara Region and Social Mobilization in EPI project supported by CPHA in collaboration with Gondar and Haramaya universities will be presented at exhibition booths with the works of other institutions primarily form the SNNPR.

We will also have our business meeting for the association members during the conference and expected to discuss, examine and highlight achievement made by EPHA in reaching its targets for the past one year within the framework of its strategic plan for the year 2005-2009 and propose recommendations for the coming years.

Excellency, Ladies and Gentlemen,

I would also take this opportunity to share with you some of the major achievements accomplished by our Association in the past one year.

These include:
- Continued its activities on HIV/AIDS prevention and control through its Cooperative Agreement with CDC-Ethiopia, particularly in the areas of:
  - Support in strategic information generation through capacity building support of graduate students from major universities to undertake operational research activities.
  - Continued Health Professional Associations Infection Prevention Advocacy Partnership to protect members from HIV infection at workplace by involving three sister associations namely; EMA, ENA and ENMA by training on IP for providers which are members of the sister associations.
  - Built the capacity of the Ethiopian Public Health Laboratory professionals Association.
  - Finalized a one year training program for 15 regional HAPCO and regional laboratory coordinators on leadership in strategic information in collaboration with experts from CDC-Atlanta, and the School of Public Health, AAU.
  - Finalized the preparation of the Field Epidemiology and Laboratory Training Program by working closely with 9 national and international institutions.
  - Strengthened National HIV/AIDS related mortality surveillance in collaboration with the School of public Health, AAU, Haramaya, Jimma and Gondar Universities and it is in the process of scaling up similar activities at Mekelle and Arbaminch Universities.
  - Finalized targeted evaluation of two major public health issues (Alcohol and Khat consumption and its association with HIV/AIDS prevention and control and KAP on HIV/AIDS of Most
at Risk population (MARP) in hot spots of the Amhara region) and in the process of undertaking 6 other evaluations and formative assessments.

- Continuing the implementation of “Repositioning Reproductive Health and Family Planning” project:
  - Provided TOT on RH/FP, HIV/AIDS and Gender for health professionals from South and North Wollo Zones and a cascaded training for 1350 HEWs (almost 86% of HEWS in the project area)
  - Provided RH/FP leadership training for 24 zonal and woreda health office health extension program coordinators.
  - Collaborated with the American Public Health Association (APHA) in the online MCH leadership training by involving 6 of its members from the different regional Chapters.
  - Undertaken different initiatives in increasing membership, using the knowledge and skills of members and strengthening chapters within and outside the country. To date the Association has 2708 members. As part of the support to regional Chapters, 7 of them were provided with basic office facilities that include computers, printers and office furniture’s.
  - Other routine activities of the Association such as disseminating health information messages and research findings to its members and the larger public health community using its official publications and representing the professional associations in different initiatives of the Ethiopian Government and other stakeholders have also continued in a wider scale.

Excellency, Ladies and Gentlemen,

In addition to what we do on a national scale, just like the issue of Public health, our engagement has not been limited by national borders. as the globalization of our world continues and the borders within countries become less and less important, EPHA has continued its global collaboration and partnership with the World Federation of Public Health Association (WFPHA) by representing the African Region in the executive Board of WFPHA and contributing to global initiatives.

To that end, on May 18, 2008, at the 42nd Annual General Meeting (AGM) of, the World Federation of Public Health Associations (WFPHA), the Federation decided to select the Ethiopian Public Health Association (EPHA) as the host of the 13th World Congress on Public Health to be held in 2012 in Addis Ababa, Ethiopia.

The world congress on public health is a global meeting organized by WFPHA every three years by bringing together public health professionals and leaders to share experiences and lessons learned in the areas of public health. Most of the previous world congresses on public health were held in high and middle income countries which included UK in 2004, Brazil in 2006 and Turkey to host it in 2009 and followed by Ethiopia in 2012.

The 2012 congress in Ethiopia will give us a golden opportunity to showcase the progress and accomplishments made in the areas of Public Health as low income country and in the African
region. In addition to public Health issues, this event will present us with an opportunity to show the real image of Ethiopia with its diversified traditions, cultures and the beauty and country to the rest of the world.

**Excellency, Distinguished Guests, Ladies and Gentlemen,**

As you are aware, as per the yearly traditions of EPHA, we have managed to select the 2008 award winners in three different categories based on our guidelines. In addition, the executive board has also decided to continue the new award category started two years back for individuals with an "Exemplary contribution to EPHA".

On behalf of the Executive Board, I want to take this opportunity to extend my deepest appreciation to those who stood alongside EPHA in all its efforts to discharge it responsibility as a professional association.

Among these are (but not limited to):

1. Federal Ministry of Health
2. The HIV/AIDS Prevention and Control Office (HAPCO)
3. The Health Education and Extension Center
4. USAID
5. CDC and the US Government
6. The David and Lucile Packard Foundation
7. Canadian public Health Association
8. American Public Health Association
9. World Federation of Public health Associations
10. SNNPR health Bureau and the Regional Government
11. Awassa Health Science college
12. The EPHA regional chapters and the various individuals and organizations that made the preparation of the 19th annual conference a success.
Excellency, Distinguished Guests and Participants,

I wish to thank many of our EPHA members and supporters who participated tirelessly in making this conference a reality. Through your strong and continuing support our Association continues to grow stronger and get recognition by many development partners. This is a meeting place for ideas, minds, best practices and networks, therefore, I invite you all to take advantage and to participate in many of the outstanding sessions at this conference and to interact with colleagues and friends from around the nation.

While engaging in this important conference, please take time to refresh and enjoy the many attractions of this beautiful city of Hawassa. I hope you will all enjoy our 19th annual conference and will go from here with renewed commitments to support and be part of our public health initiatives.

Once again, welcome to the 19th annual conference of EPHA and let us be reminded that Public health is not only a concern of health professionals, but it is Everybody's Business. *The great African and world hero President Nelson Mandela once said that: “As we le our own light shine, we unconsciously give other people permission to do the same.”

Excellency, Distinguished Guests and Participants,

Each of us has a role to play - be it big or small. And if we play our part responsibly, we can make a difference, and let us all join hands for the better future of public health and our people.

I thank you.
Institutional Award
Dr. Abebech Gobena
It all began in 1980 when she went to the holy church in South Wollo named Gishen Mariam for pilgrimage. In her pilgrimage she saw a child sucking the breast of her mother who already passed away. Her motherly concern for children didn’t allow her this time to see poor helpless kids to remain as they are. Her compassion for the child who lost the mother was to be the foundation of the grassroots’ community organization we know today as Abebech Gobena Yehetsanat Kebekabena Limat Dirijit (AGOHELD).

Today through the leadership of Dr. Abebech Gobena, AGOHELD is providing institutional care for over 3,000 orphans and vulnerable children and supports over 14,000 children from the poor and vulnerable families through different programs. The organization gives due emphasis for the development of children’s knowledge and skills. Her golden saying to supplement this fact is taken as a motto of the organization. She said that: “Cultivating children’s mind in education is the best profession on earth”. In line with this, 9 KGs and primary schools have been constructed in different project areas. Currently more than 14,300 sponsored children are getting free education.

Furthermore, the organization takes a great share in Empowering women through building their talent, skill and strengthening them through life skill training program. In the Oromia region the organization is implementing a reproductive health and HIV/AIDS program as part of the integrated community based development activity. AGOHELD program implementation is reaching 1.5 million beneficiary communities. The organization is known and recognized for its exemplary community based initiative both nationally and at international level.

The Ethiopian Public Health Association (EPHA) is happy to select AGOHELD for the 2008 Institutional Award and Certificate of Recognition for the pioneering activity in community work and saving the lives and improving the living conditions of needy children for the last 3 decades. Today on the 19th annual conference of EPHA I am happy to present Dr. Abebech Gobena to receive a Cup and certificate of recognition.
Senior Public Health Research Award

Dr. Damen Hailemariam

Dr. Damene In 1987 he graduated as a Medical Doctor with B.Sc from AAU. In 1989 he received masters of public health from the department of Community Health at AAU. In 1997 Dr. 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 ministry of Health as a general medical practitioner in Gondar. Starting from 1988 he was assigned as District health Manager at Chilalo district and 1989 he joined Arsi regional health department as regional health manager. From 1991 to 2001, with a rank of Assistant professor he served in the Department of Community Health at AAU. Since 2002 he was promoted as an associate professor in the Department of Community Health at AAU.

Between 2001 and 2005, he served as the chairman of the then Department of Community Health (currently the School of Public Health) at AAU. Dr. Damen has lead and participated in several research activities and authored and coauthored over 50 publications including chapters in over 10 books. Dr. Damen’s research activity has contributed a lot in the Development of public health in Ethiopia.

Today on the 19th annual conference of EPHA I am happy to present Dr. Damen Hailemariam to receive a Gold Medal award of the Ethiopian Public health Association for Senior Public Health Research.
Senior Public Health Service Award

Ato Amsalu Feleke

Ato Amsalu Feleke Demissie was born on February 22 1940 E.C, graduated with certificate and diploma in Laboratory technician and BSC in Public Health from Gondar Public Health College, and masters in public Health from Boston University-USA.

From 1960 until he joined the Gondar College of Medical Sciences, Ato Amsalu has served at different levels of the MOH that include service provision at different health centers, hospitals, Health Service program management and acting head and head of Regional health Departments. He joined the public health department of the GCMS as lecturer and served in different capacities.

Currently, with a rank of Assistance professor he is working as head of post graduate studies coordinating office, for the University of Gondar. He has participated in several research activities and published several papers on public health issues. Ato Amsalu has exerted his utmost effort in enhancing Public Health for over the past few decades and contributed a lot in the improvement of public health services in Ethiopia.

Today on the 19th annual conference of EPHA I am happy to present Ato Amsalu Feleke to receive a Gold Medal Award of the Ethiopian public Health Association for senior public health Service.
Senior public Health Service
Dr. Getachew Tadesse

Dr. Getachew Tadesse was born on June, 1938, graduated with B.Sc in Public health from Gondar public Health College, MD, MSC and specialization in Epidemiology from Medical Faculty of Belgrade at different times.

His professional involvement in Public Health started in 1958 when he joined as a special attachment to Malaria Eradication program, Leprosy, Tuberculosis and Venereal Disease Control Centers in Addis Ababa. Between 1960 and 1961 with a rank of captain, he served the United Nations Contingent Forces in the Congo at the U.N. hospital and Clinic. In 1961 he was assigned as Ground Forces dressers Training School and special paratrooper field Nurses in Addis Ababa. From 1973 to 1976 he served as General practitioner I 3\textsuperscript{rd} Division Armed Forces Hospital and was appointed as an Assistant Director of the Eastern Command Hospital in Harar. In 1981 he was promoted to second in command of all medical services of the Ethiopian Armed Forces. Between 1983 and 1991 Dr. Getachew served as permanent secretary and Vice Minister for the Ministry of Health where he played a major role in the expansion of district health services.

Dr. Getachew published several papers on different public health issues and has contributed a lot in the development of Public health in Ethiopia over the past few decades.

Today on the 19\textsuperscript{th} annual conference of EPHA I am happy to present Dr. Getachew Tadesse to receive a Gold medal award of the Ethiopian Public Health Association for Senior Public Health Service.
Senior Public Health Service Award
Dr. Fisseha Haile Meskel

Dr. Fisseha Haile Meskel was born on December 19 1936, graduated with B.Sc in Biology from AAU, MSC from Graduate School of Arts and Sciences of New York University-USA, PhD in Zoological Laboratory from University of Bergen-Norway and Masters of public Health from University of Michigan in USA.

From 1962 to 1964, he served as a lecturer in organic and inorganic chemistry at the Military Academy of Harar and General Science at Gondar Public Health College. In 1964 he was appointed as an Assistant Professor of Biology at AAU, and served until 1970 where his academic rank grew to Associate Professor. Between 1970 and 1977 he served as head of the department of Biology at AAU.

From 1977 to 1984 Dr. Fisseha was appointed as Director of the Central Laboratory and Research Institute. Starting from 1984 he was assigned as General Manager of the National Health Research Institute in MOH and in 1995 he joined health population and Nutrition office of the United States Agency for International Development (USAID) of Ethiopia as technical coordinator in health. Currently he is Acting Director of the Armauer Hansen Research Institute (AHRI) in Ethiopia.

In different occasions he received special Awards for international health and advancement in Ethiopian scientific community.

Dr. Fisseha has participated in several public health trainings and research activities and published over 28 scientific papers on different public health issues in peer reviewed national and international journals. In all these years of service as a public health professional, he has contributed a lot for the expansion of Public Health Ethiopia.

Today on the 19th annual conference of EPHA I am happy to present Dr. Fisseha Haile Meskel to receive a Gold Medal award of the Ethiopian Public Health Association for Senior Public Health Service.
Senior Public Health Research Award
Dr. Fikre Enquselassie Gashe

Dr. Fikre Enquselassie Gashe was born on August 19, 1962, graduated with B.Sc in Mathematics and MSc in mathematical statistics from AAU, M.Sc in Biostatistics from University of New Castle-Australia and received his PhD in infectious disease Epidemiology from Warwick University of UK.

From 1983 to 1984, he served as assistant lecturer in the Department of Mathematics at Asmara University. From 1985 to 1988 he worked as part-time lecturer in the Department of mathematics at Addis Ababa University. His professional involvement in public health started in 1989 when he joined as a lecturer in the Department of Community Health Faculty of medicine at AAU. In 1996, he was promoted to the rank of Assistant Professor and in 2002; he was further promoted to the rank of associate Professor.

In 2006, he was appointed as head of the then Department of Community Health (currently the School of Public Health) at AAU. Dr Fikre has lead and participated in several research activities and authored and coauthored over 50 publications. Dr. Fikre’s research activity has contributed a lot in the Development of public health in Ethiopia.

Today on the 19th annual conference of EPHA I am happy to present Dr. Fikre Enquselassie to receive a Gold Medal award of the Ethiopian Public health Association for Senior Public Health Research.
Certificate of Merit for Exemplary Contribution to Public Health

Prof. Dennis G. Carlson
Prof. Helmut Kloos

Although foreign nationals, both individuals made a significant contribution in the enhancement of public health in Ethiopia and in strengthening of EPHA through service, training, research and sharing the knowledge through different publications.

As a result, the Ethiopian Public Health Association (EPHA) is happy to select Professor Dennis Carlson and professor Helmut Kloos for the 2008 certificate of merit Award on exemplary contribution to public health.

Talking Points for Mr. Glenn Andres, USAID Director

XIXth Annual Ethiopia Public Health Association Annual Meeting, Awassa

October 23, 2008

Venue: Sidama Cultural Hall in the Center of the city

Time; to be announced, in the morning

...
hygiene are important areas of U.S. cooperation through USAID programs. Water and its use are essential to life on our earth. Lack of accesses to safe drinking water, sanitation facilities, and poor hygiene are a major cause of water-related illness and death. About 75% of the cases of diarrhea, intestinal worms, malnutrition, anemia, and blinding trachoma; are associated to lack of safe water, sanitation and hygiene. Sadly these diseases are easily preventable.

Water collection takes a substantial amount time and there are financial and opportunity costs. For over 52% of the Ethiopian rural population, it takes over half an hour to obtain drinking water each day. 90% of the time, it is women who collect water. Women are the primary caretakers of the sick. The constant pursuit of water and care for the sick prevents women and girls from obtaining income generating activities and even prevents girls from attending schools.

Sanitation and hygiene remain a major health challenge here. Access to latrines is very low. More than 60% of Ethiopians don’t have access to a pit latrine. This leads to contamination of drinking water and food. Lack of awareness on hygienic behaviors adaptation such as, food and water handling; water storage and at point of use water treatment are potential root of acquiring diseases, 35 million Ethiopians do not have access to sanitation, USAID agrees that by providing access to safe water, sanitation and promotion of hygiene major improvements in health would be achieved.

I was delighted to note earlier this month on October 15 that Ethiopia joined over 40 countries worldwide in a challenge to have the largest number of school children wash their hands with soap on Global Hand Washing Day. One million Ethiopian Children participated in the challenge. With this simple practice over forty percent of childhood illnesses can be prevented.

Ethiopia is making great strides in sanitation improvement. The Ethiopian ministry of Health’s visionary program of Health Extension Workers has been actively improving hygiene and sanitation in rural Ethiopia. Over 24,000 Health Extension Workers and their 2000 supervisors have been deployed. by the end of the year the cadre will be over 30,000. Earlier this month the ministry of health’s Tenth Annual Review Meeting in Mekele highlighted the achievements of Health Extension Workers and community volunteers in extending model homes in rural communities. Key concepts including hand washing and use of pit latrines.

In closing, allow me to mention that in our US financial year 2008, USAID investments in public health programs in Ethiopia is over $271.4 million, USAID also provides support for the Millennium Water Alliance, the Productive Safety Net Program as well as other health programs of interest to the EPHA: prevention and control of communicable disease; Family
planning and Reproductive health; maternal and Child health; water and Sanitation; and, HIV/AIDS prevention and Care under PEPFAR.

USAID is currently launching with the Ministry the pathfinder-ESHE follow-on a $ 50 M five year integrated maternal Child Family Planning Program, implemented in the four most populous regions of Ethiopia – Oromiya, SNNP, Amhara and Tigray, and will cover more than 350 Waredas. The core of the program is supporting the Health Extension Program.

Your Excellency, through your leadership SNNPR is one of the leading regions in improving sanitation through the Health Extension program. USAID is very proud to be your partner in these achievements in improving sanitation coverage in this region through Essential Services for Health and will continue through our new program.

May I take a moment to express how proud I am to recognize Dr Mengistu, the President of the Ethiopian Public Health Association who is a fine Public health expert and who has personally contributed greatly to Public Health in Ethiopia. We are very proud he now is one of the leader of USAID’s partners’, Pathfinder, and is key personnel for the new USAID/MOH Maternal Child Health Program.

I would also like to congratulate the Ethiopian Public Health Association for being selected to host the 13th Annual Conference of the International Public Health Association. Finally, we would like to express our appreciation to the Ethiopian Public Health Association for its advocacy role to bring “water and sanitation” into the public attention and wish you success.

I wish you success in your conference.

Representative of the MOH
Dr.Hasen Mohamed

Dear Participants

As you all know Ethiopian people like other developing countries suffer from access to quality health services and the government of Ethiopia is dedicated towards improving the expansion of preventive, promotive and basic curative services to all segments of the population through partnership and collaboration with all partners involved in the provision of health care. With this in mind the Federal Ministry of Health identified all health professional associations operating in the country as key partners in the improvement of health care delivery system in the country. It has conducted successive meetings with all health professional associations to identify areas of collaboration towards improving the health of the people. It has also signed memorandums of understanding with most of the professional associations on the identified areas of collaborative activities towards strengthening the health care delivery system in the
country. Mutual plans of actions with the ministry of health prepared and approved by the ministry and some are under implementation. To mention some:

- The Surgical Society of Ethiopia is conducting surgical camping programs in hospitals and contributed a lot in reducing the waiting list and time for those in need of surgical procedures.
- The Ethiopian Pediatrics Society is conducting training on IMNCI for service providers at different levels of health care.
- The Ethiopian Medical Association is implementing the research based incentive scheme for physicians in rural hospitals.
- The Ethiopian Medical Laboratory Association has developed the draft code of ethics and pharmaceutical practice.
- The Ethiopian Nurse Midwife Association has conducted intensive and practicum based training to midwives and HEWs.

All professional Associations are involved in the developments of guidelines, manuals and standards of health care developed by the Federal Ministry of Health.

Like other professional associations the Ethiopian Public Health Association is one of the most senior professional associations which is engaged to work in collaboration with the ministry of health and regional health bureaus to enhance the health care delivery system in the country. Some of the activities on which EPHA is engaged are:

- In the areas of HIV/AIDS/STI and TB prevention and control programs
- Publication and distribution health learning materials on core public health issues
- Capacity building programs
- Assisting the national effort of the government in the expansion and strengthening of community based health services through health extension program.

Although we say there is a good initiative started by the Federal Ministry of Health to work closely with professional associations, it is still at a very infantile stage when we compare it with the extent of our community’s health needs. We still need to maintain our collaborative efforts and further strengthen by establishing regional chapters which can closely work with the regional governments. We need also learn best practices from other countries on how the government sector works in collaboration with professional associations towards improving the health of the people.
By Dr. Solomon Worku
V/President, EPHA
23rd October 2008

Presentation Outline
• General Assembly
• Executive Board
• EPHA Chapters
• Programs & projects
• Financial issues
• Challenges

General Assembly
• An official meeting of all members of the Association continuously taking place.

Membership: 2707

Executive Board
Elected by the General Assembly of EPHA to execute the objectives of the Association
• 2 completed service of two terms (4 years)
• 2 completed 1 term (2 years)

Chapters
Branch offices of the Association established as necessary (Chapters)
• 14 Chapters in 9 regions & 1 federal city
• Active – very few
Focal Persons of Chapters:

Tigray: Dr. Amanuel Gessessew, Ato Araya Abraha, Ato seifu Hagos

Afar: Ato Melkamu Fenta

Amhara Region

• Bahir-Dar: Ato Tilahun Yimaldu, Ato Amsalu Shiferaw, Dr. Mokonnen Ayichilum
• University of Gondar: Ato Amsalu Feleke, Ato Melke Idris, Prof. Yigzaw Kebede
• South Wollo: W/t Mahteme Haile, Ato Abraham Eshete, Ato Hussien Seid
• North Wollo: Ato Kebede Kassaw, Ato Temesgen Biru, Ato Maru Begizew
• Dire Dawa: Dr. Tsigereda Kifle, Ato Tewodros Abera, Dr. Tesfaye Bahiru

Oromiya

• Jimma: Dr. Ayalew Tegegn, S/r Asresash Demissie, Ato Essayas Alemayehu
• Bale: Dr. Awel Abduckerim, Ato Jeylan Kesim, Ato Berhanu Jira

Harar

• Haramaya University: Ato Nega Baraki, Ato Melake Damena, Ato Lemesa Olgira

Gambela: Ato James Bole, Ato Korr Potch, Ato Endale Liben

Benshangul: ?, Ato Lema Adnew, Ato Yared Legesse

Somali Region: Ato Ahmed Issa, Dr. Abdurahman

SNNPR: Ato Alemayehu Bekele, Ato Wondwossen T/Silassie, Ato Kekebo Debeko

Addis Ababa: No chapter so far
1. **Capacity Building**

No of Staff Support by EPHA (Full Time Staff, temporary) and those who are paid top-up

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<tr>
<th>Site</th>
<th>2008</th>
<th>Additional Required</th>
<th>Total</th>
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<td>142</td>
<td>251</td>
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<td>20</td>
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<tr>
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<tr>
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<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>297</strong></td>
<td><strong>254</strong></td>
<td><strong>551</strong></td>
</tr>
</tbody>
</table>

2. **Information Dissemination through the following EPHA Outlets:**

- *Ethiopian Journal of Health Development* 1500 copies/issue x 3 issues = 4500 copies
- *Felege Tena Newsletter:* 4000 copies/issue x 4 issues = 16000 copies
- *Public Health Digest/ HIV/AIDS/STI/TB Bulletin:* 4000 copies/issue x 4 issues = 16000 copies
- *Masters Theses Extract:* 2000 copies x 3 issues = 6000 copies
- *EJHD Special issues:* 1500 copies
- *Annual Proceedings:* 1500 copies
- *Abstracts:* 1500 copies
3. **Projects:**

   - Promote HIV/AIDS/STI/TB related public health practices in collaboration with MoH and other stakeholders – supported by USG through CDC/Atlanta – started in 2002.
     a. Researches (& Evaluation)
     b. Trainings
     c. Infection Prevention Advocacy with associations
     d. AIDS related mortality Surveillance: in collaboration with universities
     e. Expanding PMTCT Services in Private Health Sectors in Ethiopia in collaboration with ESOG

- MCH L – American Public Health Association
  i. 1 year course, a team of 6

4. **Trainings**

   - **Short-term** – as need arises, e.g. MDGs, Managing RH Programs
     a. Research & Ethics training (with ESTA) at 2 regions = **completed**
     b. Monitoring & evaluation in collaboration with SPH/AAU – every year

   - **Long-term**
     - Support a one year Leadership in Strategic Information Training Program (LSITP) in collaboration with MoH, AAU and CDC = **15 graduated**
     - Support masters level Field Epidemiology and (Lab) Training Program (FELTP) in collaboration with MoH, AAU and CDC at planning stage = **Process going on, recruitment of 13 students starts soon**
     - MCH leadership online training in collaboration with American Public Health Association (APHA) – **6 on training**

5. **Generation of information/ Researches:**

   - **Support AIDS Related Mortality Surveillance Surveys**
     - Addis Ababa AIDS MSP in collaboration with AAU
     - Gilgel-Gibe AIDS MSP in collaboration with JU
     - Dabat AIDS MSP in collaboration with UG
     - Butajira AIDS MSP in collaboration with AAU
     - Kersa AIDS MSP in collaboration with HU
     - AIDS MSP at Mekelle U – process started
     - AIDS MSP at Arbaminch U – process started
• Support >30 MPH theses of university students – AAU

– UG failed its obligation

– JU not started

• Evaluation of Alcohol/khat consumption in relation to HIV infection=Completed

• Geographic Targeting of HIV Prevention Interventions to MARPs in High Prevalence Hotspot Areas in Amhara region = Completed

• Evaluation & screening for TB among patients attending ART clinics = Completed

• Survey on the Magnitude and Risk Factors for HIV Infection among MARPs in Ethiopia= on process

• Assessment of Utilization and Quality of VCT in Ethiopia = on process

• Evaluation of Effect of PEPFAR Interventions on the Health Sector = on process

• Formative Assessment of MSM =Started

• Assessment of Route of Spread of HIV from Hot Spots = on process

• BSS Round III = = on process

6. Social Mobilization in EPI

Social Mobilization in EPI by graduating health sciences students in collaboration with University of Gondar, Haramaya University, EPHA chapters and funded by CPHA/CIDA = phasing out
7. RH/FP-Health Extension Program (EPHA, SPH/AAU, Amhara RHB, Packard Foundation)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Status</th>
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<td>TOT on training of HEWs</td>
<td>Performed</td>
</tr>
<tr>
<td>TOT guide on HEWs training</td>
<td></td>
</tr>
<tr>
<td>References material for HEWs</td>
<td>Performed</td>
</tr>
<tr>
<td>Translation of references material for HEWs to local language</td>
<td>Performed</td>
</tr>
<tr>
<td>In-service training of HEWs</td>
<td>86.2% Performed</td>
</tr>
<tr>
<td>Supervision, M&amp;E manual</td>
<td>Performed</td>
</tr>
<tr>
<td>Training on Supervision, M&amp;E</td>
<td>Performed</td>
</tr>
<tr>
<td>Leadership training on FP/RH</td>
<td>50% Performed</td>
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<tr>
<td>Develop IEC Materials</td>
<td>Performed</td>
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<tr>
<td>Conduct operations research</td>
<td>Process started</td>
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<tr>
<td>Advocacy</td>
<td>Continued</td>
</tr>
</tbody>
</table>

High involvement of EPHA in national committees

Networking with other health professionals associations

- Local associations
  - EMA, ENA, ENMA, EPHLA, ESOG
- International associations
  - Still representing African PHAs
  - Canadian PHA (CPHA)
  - American PHA (APHA)
  - World Federation of PHAs (WFPHAs)
- 2012 World Health Congress

8. Networking/Partnership

9. Finance

Budget Utilization – Auditor report
10. **Challenges**

- Office premises – Still not successful
- Lack of transportation facility (expensive)
- Low budget utilization by partners
  - Need Vs project mandate (rules & regulations)
- Slow ethical clearance of protocols
- Low diversity of budget sources (partially due to large scope of current projects)
- Regional chapters (need for regionalized structure)

*Report by: Dr. Solomon Worku*

V/President, EPHA                     Signature ________________
Annex 3. Audit Report

ETHIOPIAN PUBLIC HEALTH ASSOCIATION

REPORT AND ACCOUNTS
FOR THE YEAR ENDED 31ST JULY, 2008

AWEKE GEBRE SELASSIE AND COMPANY
CERTIFIED PUBLIC AUDITORS

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Addis Ababa
Ethiopia
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INDEPENDENT AUDITORS' REPORT
ETHIOPIAN PUBLIC HEALTH ASSOCIATION (EPHA)

We have audited the accompanying balance sheet of Ethiopian Public Health Association as at 31st July, 2008 and the related income and expenditure statement 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 Association. 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 reasonable assurance about whether the financial statements are free of material misstatement whether caused by fraud or other irregularity or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements. 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. 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, present fairly, in all material respects, the financial position of Ethiopian Public Health Association at 31st July, 2008 and the results of its operations for the year then ended.

AWEKE GEBRE SELASSIE AND COMPANY
CERTIFIED PUBLIC AUDITORS

October 15, 2008
Addis Ababa
ETIOPIAN PUBLIC HEALTH ASSOCIATION (EPHA)

BALANCE SHEET
AS AT 31\textsuperscript{st} JULY, 2009

<table>
<thead>
<tr>
<th>Notes</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED ASSETS</td>
<td>3(4)</td>
</tr>
</tbody>
</table>

CURRENT ASSETS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and bank</td>
<td>7,014,497.21</td>
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<tr>
<td>Debtors</td>
<td>2,318,565.77</td>
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<tr>
<td></td>
<td>9,333,062.98</td>
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</table>

CURRENT LIABILITIES

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Creditors</td>
<td>1,050,815.17</td>
</tr>
</tbody>
</table>

NET CURRENT ASSETS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7,682,247.81</td>
</tr>
<tr>
<td></td>
<td>7,682,554.81</td>
</tr>
</tbody>
</table>

REPRESENTED BY

Fund balance as per the attached income and expenditure statement | 7,682,554.81 | 6,535,414.86 |
<table>
<thead>
<tr>
<th></th>
<th>Notes</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCOME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project income - Grants</td>
<td>8.1</td>
<td>17,734,713.12</td>
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<tr>
<td>Administrative income (10% charge)</td>
<td></td>
<td>166,474.39</td>
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<tr>
<td>Membership fee</td>
<td>8.2</td>
<td>85,880.55</td>
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<tr>
<td>Interest income</td>
<td></td>
<td>86,704.15</td>
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<td>Sundry income</td>
<td></td>
<td>496,493.56</td>
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<tr>
<td></td>
<td></td>
<td>18,560,265.78</td>
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<tr>
<td><strong>EXPENDITURE</strong></td>
<td></td>
<td></td>
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<tr>
<td>Personnel cost</td>
<td>9.1</td>
<td>2,307,340.20</td>
</tr>
<tr>
<td>Travel and per diem</td>
<td></td>
<td>1,132,669.82</td>
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<tr>
<td>Office supplies</td>
<td>9.2</td>
<td>586,443.93</td>
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<tr>
<td>Occupancy cost</td>
<td>9.3</td>
<td>340,648.87</td>
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<td>Communication</td>
<td>9.4</td>
<td>257,670.27</td>
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<tr>
<td>Monitoring and evaluation cost</td>
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<td>165,025.19</td>
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<tr>
<td>Advertising expense</td>
<td></td>
<td>18,770.09</td>
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<tr>
<td>Consultancy fees</td>
<td></td>
<td>3,053,161.76</td>
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<tr>
<td>Insurance</td>
<td></td>
<td>5,846.98</td>
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<tr>
<td>Workshop, meeting &amp; training</td>
<td>9.5</td>
<td>2,382,814.09</td>
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<tr>
<td>Transferred to sub-recipients</td>
<td></td>
<td>4,892,051.82</td>
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<tr>
<td>Ethiopian Public Health Laboratory Association</td>
<td></td>
<td>148,079.79</td>
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<tr>
<td>Research work</td>
<td></td>
<td>99,000.00</td>
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<td>Bank service charges</td>
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<td>52,123.06</td>
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<tr>
<td>Fuel</td>
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<td>47,046.52</td>
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<tr>
<td>Membership fee</td>
<td></td>
<td>2,469.80</td>
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<tr>
<td>Purchase of fixed assets</td>
<td>9.6</td>
<td>2,412,095.82</td>
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<tr>
<td>Audit fees</td>
<td></td>
<td>21,735.00</td>
</tr>
<tr>
<td>Administration cost</td>
<td></td>
<td>46,203.61</td>
</tr>
<tr>
<td>Refreshment</td>
<td></td>
<td>5,456.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17,413,125.83</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6,571,016.18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,147,139.86</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,645,166.55</td>
</tr>
<tr>
<td><strong>Add: Fund balance on 01.08.07</strong></td>
<td></td>
<td>6,553,414.86</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4,890,389.14</td>
</tr>
<tr>
<td><strong>Less: Prior year adjustment in respect of irrecoverable debts</strong></td>
<td></td>
<td>7,682,554.81</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6,553,554.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>139.83</td>
</tr>
<tr>
<td>Fund balance 31-07-08</td>
<td></td>
<td>7,682,554.81</td>
</tr>
<tr>
<td>Fund balance transferred to balance sheet</td>
<td></td>
<td>(7,682,554.81)</td>
</tr>
</tbody>
</table>
ETHIOPIAN PUBLIC HEALTH ASSOCIATION (EPHA)

NOTES FORMING PART OF THE ACCOUNTS

FOR THE YEAR ENDED 31ST JULY 2008

Currency: ETHIOPIAN BIRR

1. ESTABLISHMENT

The Ethiopian Public Health Association is established in the month of August 1989 to be governed in accordance with the terms and conditions set forth in its Constitution.

2. OBJECTIVES

The objectives of EPHA are the advancement of public health measures for the promotion of health, prevention of diseases, timely treatment of the sick and rehabilitation of the disabled by:

2.1 Bringing together persons who are trained in, working in, or interested in public health or public health-related professions.

2.2 Participating in and making recommendations on health policy, planning, training, management and practice of public health.

2.3 Promoting the professional standard and interest of its members and other public health personnel.

2.4 Advancing research in public health.

2.5 Establishing a forum for promoting communication among members and the public on matters of health. Networking with similar associations and societies with similar professional aims within Africa as well as outside.

2.6 Publishing a scientific journal, a newsletter, etc., regularly to disseminate information to public health professionals and to the public.
2.7 Actively participating with other sister organizations in the country in the strengthening of professional associations as well as in the promotion of health.

2.8 Playing active advocacy roles on important national and international health issues.

3. ACCOUNTING POLICIES

The accounting policies adopted by the Association are indicated hereunder.

a. EPHA follows a modified cash basis of accounting.

b. Fixed assets are charged as expenses at the time of purchases against a nominal value of 1.00 Birr.

c. Donations in foreign currencies are stated in the accounts in Birr at the rate of exchange prevailing on the date the bank account of the association is credited.

4. FIXED ASSETS - NOMINAL VALUE OF ONE BIRR

<table>
<thead>
<tr>
<th></th>
<th>Balance 01.07.07</th>
<th>Addition</th>
<th>Adjustment</th>
<th>Balance 31.07.08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed assets - EPHA</td>
<td>171.00</td>
<td>-</td>
<td>91.00</td>
<td>262.00</td>
</tr>
<tr>
<td>Fixed assets - EPHA/CDC</td>
<td>149.00</td>
<td>25.00</td>
<td>-</td>
<td>174.00</td>
</tr>
<tr>
<td>Fixed assets - EP/RH</td>
<td>51.00</td>
<td>2.00</td>
<td>-</td>
<td>53.00</td>
</tr>
<tr>
<td></td>
<td>371.00</td>
<td>27.00</td>
<td>91.00</td>
<td>207.00</td>
</tr>
</tbody>
</table>

5. CASH AND BANK

<table>
<thead>
<tr>
<th>Description</th>
<th>Balance 2007</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petty cash fund</td>
<td>1,050.72</td>
<td>2,961.83</td>
</tr>
<tr>
<td>CBE - Addis Ababa branch C/A - EPHA</td>
<td>1,850,124.44</td>
<td>1,643,062.83</td>
</tr>
<tr>
<td>CBE - &quot; &quot; &quot; CDC</td>
<td>194,077.96</td>
<td>465,353.25</td>
</tr>
<tr>
<td>CBE - Addis Ababa branch S/A</td>
<td>2,575,351.33</td>
<td>2,301,552.91</td>
</tr>
<tr>
<td>CBE - &quot; &quot; &quot; C/A - FP/RH</td>
<td>2,263,892.76</td>
<td>1,925,821.18</td>
</tr>
<tr>
<td></td>
<td>7,014,487.21</td>
<td>6,338,752.00</td>
</tr>
</tbody>
</table>
6. **WORK ADVANCES**

Details of work advances are listed below:

<table>
<thead>
<tr>
<th>Name</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melaku Maru</td>
<td>7,573.60</td>
</tr>
<tr>
<td>Wondewossen Zenebu</td>
<td>4,768.00</td>
</tr>
<tr>
<td>Endns Belay</td>
<td>7,756.23</td>
</tr>
<tr>
<td>Tadesse Amera</td>
<td>7,733.00</td>
</tr>
<tr>
<td>Nega Bereki</td>
<td>24,375.00</td>
</tr>
<tr>
<td>Abenet Takole</td>
<td>6,682.60</td>
</tr>
<tr>
<td>Moges G/Mariam</td>
<td>5,907.00</td>
</tr>
<tr>
<td>Assegid Tassew</td>
<td>8,423.20</td>
</tr>
<tr>
<td>Samson Chane</td>
<td>6,609.60</td>
</tr>
<tr>
<td>Kekebo Debeke</td>
<td>8,287.65</td>
</tr>
<tr>
<td>Anteneh Girma</td>
<td>8,392.56</td>
</tr>
<tr>
<td>Ejigayehu Yirmam</td>
<td>7,677.80</td>
</tr>
<tr>
<td>Kidist Negash</td>
<td>9,460.00</td>
</tr>
<tr>
<td>Zehara Suhali</td>
<td>5,889.61</td>
</tr>
<tr>
<td>Haile Bekele</td>
<td>9,597.60</td>
</tr>
<tr>
<td>Addis Continental Institute of Public Health</td>
<td>841,860.30</td>
</tr>
<tr>
<td>Dr. Dawit Wolday</td>
<td>27,500.00</td>
</tr>
<tr>
<td>Dr. Dereje Hatte</td>
<td>16,000.00</td>
</tr>
<tr>
<td>Hawa Seid - staff debtors</td>
<td>702.96</td>
</tr>
<tr>
<td>Asrat W/Meskel</td>
<td>469.21</td>
</tr>
<tr>
<td>Hawlet Assen - staff debtors</td>
<td>408.43</td>
</tr>
<tr>
<td>Population Service International</td>
<td>1,027,785.32</td>
</tr>
<tr>
<td>Birhnet Development and IT Solutions P.L.C.</td>
<td>445,333.24</td>
</tr>
<tr>
<td>Sisaynesh Bekele - staff debtors</td>
<td>10,815.00</td>
</tr>
<tr>
<td>Mid - wives Association</td>
<td>53,075.60</td>
</tr>
</tbody>
</table>

**Total**

2,100,608.20

**1,518,898.67**

---

**OTHER DEBTORS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepaid office rent</td>
<td>146,818.38</td>
</tr>
<tr>
<td>Sundry debtors</td>
<td>71,141.18</td>
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</tbody>
</table>

**Total**

2,318,555.77

1,664,856.37
7. **CREDITORS**

**EARMARKED FUND**

<table>
<thead>
<tr>
<th>Description</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring and evaluation</td>
<td>1,013,342.85</td>
<td>1,119,024.02</td>
</tr>
<tr>
<td>Visionary leadership program</td>
<td>1,843.17</td>
<td>1,843.17</td>
</tr>
<tr>
<td>National Committee for Blindness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevention (NCPB)</td>
<td>156,368.97</td>
<td>156,368.97</td>
</tr>
<tr>
<td>International conference (organizing committee)</td>
<td>83,825.39</td>
<td>83,825.39</td>
</tr>
<tr>
<td>UPPSALA University</td>
<td>13,924.47</td>
<td>8,353.57</td>
</tr>
<tr>
<td>Professor Rada</td>
<td>359.19</td>
<td>359.19</td>
</tr>
<tr>
<td>UMEA University (Dr. Filiku)</td>
<td>461.89</td>
<td>2,794.54</td>
</tr>
<tr>
<td>Mental health projects</td>
<td>252,118.69</td>
<td>7,475.91</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,522,244.81</td>
<td>1,358,248.32</td>
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</table>

**OTHER CREDITORS**

<table>
<thead>
<tr>
<th>Description</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash indemnity</td>
<td>5,500.00</td>
<td></td>
</tr>
<tr>
<td>Provident fund</td>
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<td></td>
</tr>
<tr>
<td>Withholding tax</td>
<td>16,794.37</td>
<td>23,035.15</td>
</tr>
<tr>
<td>Income tax</td>
<td>41,736.17</td>
<td>182.50</td>
</tr>
<tr>
<td>Sundry creditors</td>
<td>5,506.39</td>
<td>2,794.54</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>70,083.17</td>
<td>28,012.19</td>
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</table>

**ACCRUALS**

<table>
<thead>
<tr>
<th>Description</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accruals - National Committee for Blindness Prevention (NCPB)</td>
<td>44,285.00</td>
<td>60,000.00</td>
</tr>
<tr>
<td>Audit fee - Aweke Gbere Seleassie and Company</td>
<td>9,000.00</td>
<td>7,300.00</td>
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<tr>
<td>Accruals - Telephone charge</td>
<td>5,222.38</td>
<td>7,003.00</td>
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<tr>
<td><strong>Total</strong></td>
<td>58,457.39</td>
<td>74,303.00</td>
</tr>
</tbody>
</table>

**Total**                                              | 1,659,815.17 | 1,488,554.51 |

8. **REVENUE**

The details of revenue is shown as follows:

8.1 **PROJECT INCOME - GRANTS**

<table>
<thead>
<tr>
<th>Description</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian Public Health Association (CPHA)</td>
<td>120,751.86</td>
<td>37,751.26</td>
</tr>
<tr>
<td>Ethiopian science and technology Commission (ESTC)</td>
<td></td>
<td>3,000.00</td>
</tr>
<tr>
<td>Center for Disease control (CDC)</td>
<td>14,446,541.26</td>
<td>7,406,460.36</td>
</tr>
<tr>
<td>Packard foundation</td>
<td>3,164,420.00</td>
<td>271,329.04</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>17,734,713.32</td>
<td>7,717,570.66</td>
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</table>
## 8.2 MEMBERSHIP FEE

<table>
<thead>
<tr>
<th>Description</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership fee – individuals</td>
<td>77,614.30</td>
</tr>
<tr>
<td>Membership fee – institutions</td>
<td>8,266.28</td>
</tr>
<tr>
<td>Total</td>
<td><strong>85,880.58</strong></td>
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</tbody>
</table>

## 9. EXPENDITURE

### 9.1 PERSONNEL COST

<table>
<thead>
<tr>
<th>Description</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic salary – EPHA</td>
<td>81,243.46</td>
</tr>
<tr>
<td>Basic salary – EJHD</td>
<td>10,396.00</td>
</tr>
<tr>
<td>Salary and Wages – EPHA/CDC</td>
<td>1,496,930.58</td>
</tr>
<tr>
<td>Salary and Wages – EP/R</td>
<td>332,500.16</td>
</tr>
<tr>
<td>Transport allowance – EPHA</td>
<td>25,030.35</td>
</tr>
<tr>
<td>Transport allowance – CDC</td>
<td>160,250.33</td>
</tr>
<tr>
<td>Transport allowance – EP/R</td>
<td>35,930.33</td>
</tr>
<tr>
<td>Provident fund – EPHA</td>
<td>8,202.29</td>
</tr>
<tr>
<td>Provident fund – fringe benefit - CDC</td>
<td>122,810.29</td>
</tr>
<tr>
<td>Provident fund – EP/R</td>
<td>33,375.42</td>
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<tr>
<td>Casual labour</td>
<td>8,067.00</td>
</tr>
<tr>
<td>Total</td>
<td><strong>2,307,340.20</strong></td>
</tr>
</tbody>
</table>

### 9.2 OFFICE SUPPLIES

<table>
<thead>
<tr>
<th>Description</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stationery</td>
<td>134,563.98</td>
</tr>
<tr>
<td>Journal of Health Development and other publications</td>
<td>417,238.06</td>
</tr>
<tr>
<td>Office supplies</td>
<td>1,216.50</td>
</tr>
<tr>
<td>CDC- office supplies</td>
<td>30,714.49</td>
</tr>
<tr>
<td>FPR- office supplies</td>
<td>2,721.20</td>
</tr>
<tr>
<td>Total</td>
<td><strong>556,443.93</strong></td>
</tr>
</tbody>
</table>

### 9.3 OCCUPANCY COST

<table>
<thead>
<tr>
<th>Description</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office rent</td>
<td>283,889.14</td>
</tr>
<tr>
<td>Electricity</td>
<td>9,940.16</td>
</tr>
<tr>
<td>Repair and maintenance</td>
<td>40,848.38</td>
</tr>
<tr>
<td>Office partition</td>
<td>-</td>
</tr>
<tr>
<td>Cleaning supplies</td>
<td>5,161.19</td>
</tr>
<tr>
<td>Total</td>
<td><strong>340,848.67</strong></td>
</tr>
</tbody>
</table>

Andeta Gertse Sagesa & Co
Certified Public Accountant
9.4 COMMUNICATION

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone, internet and fax</td>
<td>227,736.54</td>
</tr>
<tr>
<td>Postage</td>
<td>29,941.73</td>
</tr>
<tr>
<td></td>
<td>257,678.27</td>
</tr>
<tr>
<td></td>
<td>168,182.31</td>
</tr>
</tbody>
</table>

9.5 WORKSHOP

EPHA/EPHA - CDC Workshop, meeting and conference

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,282,814.09</td>
</tr>
<tr>
<td></td>
<td>1,156,721.51</td>
</tr>
</tbody>
</table>

9.6 PURCHASE OF FIXED ASSETS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>EPHA - Office equipment</td>
<td>3,634.00</td>
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<tr>
<td>Computer and Accessories</td>
<td>10,500.00</td>
</tr>
<tr>
<td>CDC-office equipments</td>
<td>823,804.11</td>
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<tr>
<td>CDC-office furniture</td>
<td>166,973.13</td>
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<tr>
<td>CDC-computer and Accessories</td>
<td>153,788.43</td>
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<tr>
<td>EJHD - Office equipment</td>
<td>23,398.99</td>
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<tr>
<td>EJHD - Office furniture</td>
<td>6,332.13</td>
</tr>
<tr>
<td>EP/RH - Office furniture</td>
<td>2,959.15</td>
</tr>
<tr>
<td>Vehicle</td>
<td>1,221,205.68</td>
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<tr>
<td></td>
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<td></td>
<td>2,412,695.62</td>
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<tr>
<td></td>
<td>320,384.72</td>
</tr>
</tbody>
</table>

10. CONCLUSION

10.1 We are most grateful to the management and employees of the Association for the assistance and co-operation extended to us during the course of the audit.

10.2 Should there be any information required in respect of these accounts and report, we shall be pleased to supply it.

AWEKE GEBRE SELASSIE AND COMPANY
CERTIFIED PUBLIC AUDITORS

October 15, 2008
Addis Ababa
EPHA Values

EPHA is committed to improve the health and wellbeing of all Ethiopians through the dedicated and active involvement of its members and in collaboration with all stakeholders. EPHA also stands for the professional development of its members without prejudice to gender, political, religious, or ethnic affiliations.

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